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ABSTRACT

Performance testing of the Far West Laboratory (FWL) Experience-Based Career Education (EBCE) model and accumulation of evaluation information from experience with Far West School (for model implementers) conducted during 1974-75 is discussed in this evaluation report. Three types of information are developed: Evidence related to student accomplishment, analyses of the utility of program elements, and evidence showing the degree of acceptance by certain self-selected school districts. Following the introductory chapter, which gives an overview of the FWL-EBCE model and program, chapter 2 contains a description of the overall evaluation design, including a listing of data collection sources, procedures, and instruments. Chapter 3, Student Population, defines the composition of participating groups, i.e., returning students, entering students, controls, and graduates. Attrition during fall and spring is reported. Chapter 4, Program Use and Effects, contains information on student plans, perceptions and attitudes, differential use of program features, and relations among student characteristics, program features, and program outcomes. Chapter 5, Program Implementability, deals with procedures for assuring adherence to the model, plans for continuation of Far West School in Oakland, California, feasibility of adoption of the FWL-EBCE model in different districts, and factors identified as critical in adopting the model. Chapter 6 is a brief summary of findings contained in the report. (TA)

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EXPERIENCE-BASED CAREER EDUCATION
FINAL EVALUATION REPORT
FY 1975

Paul Christensen
Robert Spotts
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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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LIST OF ABBREVIATIONS

CR	=	Community Resource
EBCE	=	Experience-Based Career Education
ETS	=	Educational Testing Service
FUSD	=	Fresno Unified School District
FWL	=	Far West Laboratory for Educational Research and Development
FWL-EBCE	=	Far West Laboratory Experience-Based Career Education
FWS	=	Far West School
LC	=	Learning Coordinator
LEA	=	Local Educational Agency
N	=	Number (total)
NIE	=	National Institute of Education
OUSD	=	Oakland Unified School District
RO	=	Resource Organization
RP	=	Resource Person
SAR	=	Student Activity Report
SD	=	Standard Deviation
TAT	=	Technical Assistance and Training

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CHAPTER 1:

Introduction

CHAPTER I: INTRODUCTION

The Far West Laboratory version of Experience-Based Career Education (EBCE) has been operating for three years as an alternative high school, known as Far West School, located in downtown Oakland. Extensive feasibility studies were conducted, followed by the 1972-73 year of model development in the alternative school with 30 students, the 1973-74 year of further development and stabilization with 55 students, and the 1974-75 year of model documentation and performance testing with approximately 100 students.

The purpose of this report is to provide evaluation information to answer the questions of those who contemplate adopting or have adopted the Far West Laboratory model (FWL-EBCE) and to inform the educational research community about EBCE evaluation methods and findings. The study complements two other evaluations, each with a different emphasis: (1) the Educational Testing Service external evaluation of EBCE conducted concurrently with this study and (2) the Far West Laboratory major evaluation of EBCE last year (1973-74).

THE MODEL

Briefly, the FWL-EBCE model seeks to provide students with a comprehensive alternative to regular high school, focusing on experience-based learning in the community that allows them to acquire credits toward graduation and the life skills and career knowledge necessary to pursue their future goals. The model emphasizes one-to-one relationships with individual adults--resource persons--in work settings where they share occupational experience, personal knowledge and skills, and interests. The essentials of a secondary education are integrated with career preparation through a cumulative series of planned, personalized learning experiences in a wide variety of life and work settings.

Student programs are completely individualized and learner directed. They are carried out primarily through student-planned "learning projects," Far West's method of individualization in which students select, sequence, and use resources according to their own particular interests, graduation requirements, and future plans. Further, the projects are based on goals and evaluation criteria that students help specify. Designed to blend growth in academic subjects, career development, and basic and life skills, each project:

- is organized around a topic or issue relevant to a career or discipline;
- is focused in terms of significant questions that require for their answer planned learning experiences at resource sites and the use of other information sources such as related readings;
- includes activities that require the student to apply communications, interpersonal, and/or computational skills in practical, career-related situations; and
- Should result in demonstrable growth toward stated goals, and in tangible products for which credit is awarded.

Students spend a substantial portion of their time at learning sites in the community; the FWL-EBCE center serves as a home base where they plan projects, schedule appointments with resources and return to digest, share their experiences, and work on projects. At the center, students also use supplementary resources such as tutorials, workshops, and programmed instructional materials, coordinated by a Skills Specialist. Here students also come in contact with the Program Director, who serves as administrative coordinator and staff supervisor, and the Resource Analyst, who is responsible for recruiting, analyzing, and maintaining the pool of resources.

The key staff role, however, is that of the Learning Coordinator (LC), a combination teacher/counselor. Each LC works with 20 to 30 students to help them:

- formulate long-term goals consistent with their own interests and educational needs, and decide what steps are necessary to achieve them;
- determine what is worth learning by focusing areas of inquiry, identifying resources, and developing project plans;
- refine their interests, clarify their values, and periodically reassess needs as dictated by the nature of cumulative experiences;
- integrate what they know about themselves with information about career and educational opportunities;
- monitor their own progress by articulating problems, devising appropriate solutions, and modifying learning strategies to incorporate new insights and emerging interests.

The LC coordinates the student's total learning program and monitors on-site learning experiences through counseling sessions and regular contact with resources in the community. While LCs are primarily facilitators, they are

teachers in one important sense--working with students individually and in small group sessions, they should be able to teach inquiry, problem-solving, planning, and decision-making skills necessary for independent learning.

LCs also provide students with the kind of feedback that can help them make sense out of what they are doing and learning in the community. This process of consolidating and interpreting diverse experiences, of reinforcing and further stimulating learning, should pervade all staff's daily interactions with students.

The EBCE program goals are documented in terms of desired student accomplishment. As stated in the FWL-EBCE Operating Plan FY 1975, FWS graduates should be:

1. "Turned on" to learning: work at it, view every situation and every human contact as an opportunity to learn something.

2. Planful: not only about their long-range futures, but about what they want to do and achieve.

3. Self-reliant: able to set their own goals, plan activities, manage their time and other resources, work independently, recognize when they need help and seek it, evaluate their own behavior and learn from it, and accept the consequences of their own decisions and actions.

4. Capable of interacting with adults as equals: know what is expected of them as adults, able to communicate on an adult level, able to make and keep realistic commitments to others, and have reasonable expectations of others.

5. Capable of making realistic and satisfying career choices: more informed about career options and requirements, and more aware of their own values, needs, goals, strengths, and limitations.

6. Independent learners: able to identify what's worth learning, identify and use effective sources and methods of acquiring information, analyze, evaluate, and incorporate new information into their own knowledge and experience base.

THE FWL EVALUATION IN PERSPECTIVE

A major evaluation of FWL's EBCE program was done by Far West Laboratory last year. This report will not duplicate that effort. Moreover, Educational Testing Service was awarded a contract for conducting a full scale evaluation of the EBCE programs for the school year just ending, and our intent is to avoid anticipating their findings.

The FWL-EBCE internal evaluation staff has expended substantial effort to ensure that the external evaluation contractor will be able to conduct a credible and comprehensive evaluation of the FWL-EBCE program, and we assume they will satisfy the needs of NIE for a summative evaluation of the FWL model. Among the measures we took to assure a credible external evaluation were:

1. Arranging for ETS staff to administer and monitor both the pre and post data collection sessions;

2. Arranging for ETS to score and/or keypunch objective items and tests for both pre and post test instruments;

3. Arranging for ETS staff observations of 20 students at field sites and at the learning center. These observations were conducted at midyear and were repeated at the end of the year;

4. Providing open access to FWS by the assigned ETS staff member for the entire school year;

5. Recommending that the external contractor conduct an anthropological study of the kind done for us by Stanford University in 1973-1974. We provided open access to the school by two anthropologists working over extended periods throughout the entire 1974-1975 school year;

6. Selecting and maintaining a "pure control group" of 88 students at pretesting and 65 students at posttesting. (Our contract specifies 35 as the minimum number of control group students to be posttested);

7. Making provisions for ETS to select the students to be given in-depth interviews, and adhering closely to the interview schedules;

8. Supporting all other data collection efforts of ETS, such as their telephone interviews of Resource Persons and Parents and interviews with EBCE staff.

In accordance with plans formulated jointly with NIE and the three other laboratories conducting EBCE programs, the internal and external evaluation activities were interwoven. Some of the evaluation functions were carried out by Laboratory evaluation staff, some by ETS evaluation staff, and some by both, with the agreement that all data collected would be made available for use by both parties. Due to differences in contracting periods and to technical problems encountered by ETS in obtaining and processing data from four EBCE sites, their data are not available for inclusion in this report. Their plan is to report their findings in November, 1975.

EVALUATION OF THE SCHOOL YEAR 1973-74

Although evaluation efforts conducted by FWL in the previous year were not duplicated this year, some of the past results could assist adopters in interpreting the design and outcomes of the FY 1975 evaluation. Methods and findings from the FWL 1973-74 evaluation have been presented, along with those from three other laboratories with EBCE programs, to the Office of Education/ National Institute of Education Joint Dissemination Review Panel. After weighing the evidence, this review panel approved EBCE for dissemination.

Since the major summative findings for this year await publication of the ETS report in November, the reader may be interested in the following summary of major FWL findings at FWS in 1973-74. The complete evaluation is documented in the FWL-EBCE reports "Final Evaluation Report FY74," and "Summary of Evaluation Findings FY 1974."

Evaluation of 1973-74 Program Outcomes

In the absence of proven techniques for measuring an educational innovation such as EBCE, we relied on a multi-dimensional approach involving a variety of instruments, informants, and analytic techniques. Methods of data collection included external observations, written questionnaires, rating scales, interview schedules, performance samples, and various forms and documents completed by students as part of their instructional program. The design included pre- and post-testing, between-group comparisons, and other traditional features such as the maintenance of two groups designated experimental and control that were selected randomly from the pool of student applicants.

Eighty-five to 90% of FWS students expressed a strong preference for FWS compared to schools they had previously attended and said that if again faced with the choice, they would apply to FWS. The major reasons for this preference were that FWS provided much more practical experience and education; allowed more individual freedom and responsibility; provided opportunities learn about occupations; and was much friendlier, with less conflict than regular schools. When asked to give an overall judgment of their school, more FWS students (75%) than control students (29%) had an unqualified positive judgment;

more control students (50%) than FWS students (none) had an unqualified negative judgment.*

Parents' overall opinions were almost unanimously positive about Far West School and the effect it was having on their children. They perceived their children as being more interested in school, working harder, assuming more responsibility, exhibiting greater confidence, motivation and maturity, and generally doing a better job than they had done before.

Despite the fact that the supplemental portion of the basic skills program was not fully in place until Spring 1974 and the primary emphasis of the program was on skills acquisition through field experience, the learning of basic skills did not suffer from the absence of the traditional classroom. There was no significant difference in performance on the Iowa Test of Educational Development between the experimental and control groups.

On the basis of a writing sample judged for quality by independent readers, Far West students showed a significant increase in their knowledge of mechanics of writing, their ability to communicate effectively in writing, and the maturity of their written thought. When rating their school with respect to help received in improving writing, FWS and comparison students did not differ significantly. From available data, it seems clear that FWS students did improve their writing skills, but there was no evidence that FWS was either more or less effective than comparison schools in this regard.

The EBCE program appeared to be successful in providing students with opportunities for growth in the areas of self-development and interpersonal skills. Students and resources alike were enthusiastic about this aspect of the Far West School program. Resource persons, in their ratings of effectiveness of 15 aspects of the program, ranked "work with others" and "improve interpersonal and social skills" as among the most effective.

Far West students showed more variability in reporting their future plans than did control students. They were more inclined to change their plans and to consider a wide variety of options. Many FWS students shifted their plans in the direction of "keeping their options open" by continuing education or training. The percentage of comparison students who had apparently chosen specific jobs was significantly higher than was the FWS student percentage.

*Control students were randomly assigned from the applicant pool.

It seemed important to get a description of the Far West School from a fresh perspective. To supplement data collected from instruments and interviews, it was decided to bring in anthropologists from Stanford University to conduct an ethnographic study to define what was actually taking place at the school from the perspective of the students. Working under the supervision of Stanford anthropology professor George Spindler, two graduate students spent some 100 hours of field work observing the interactions among students, staff, and resource people in the community. They followed a number of students through their daily activities in and around Far West School. The paper summarizing their results, "Anthropological Perspectives of Far West School and Students," contains a number of valuable insights about the program.

One of the most emphatic findings in the study was the importance of the FWS learning center itself as a learning environment where students exchange insights, information, and ideas about experiences in the community. The observers found that "experienced students were effective in preparing novices to deal with resources and resource people that they would meet, and that students seem to give and receive information without the competitiveness, secrecy, and withholding that often mark relations in the traditional classroom setting." They were much impressed by the amount of learning that appears to take place within the peer context or network--an observation that was not picked up through the other data-collection methods.

The anthropologists found little homogeneity among the resource people and what they demand of a student, and they said this was occasionally disorienting to the students. However, Far West students tended to be able to direct the situation in such a way that their own goals could be met.

Evaluation in 1973-74 for Program Improvement

Program development and formative evaluation during 1973-74 resulted in a documented model for the FY75 performance test. Formative evaluation identified some deficiencies (e.g., certain program components such as diagnosis, orientation, and guidance were not adequately implemented), and revisions were made in model procedures and products. The formative evaluation effort coupled with program development helped to move the model toward sufficient stability to merit a performance test in 1974-75.

Procedures for locating, developing, and maintaining resources were quite successful. The number of resources increased from 77 to 152 during the

twelve-month period ending August 31, 1974. This and other indications suggest that future FWL-EBCE programs can maintain sufficient pools of resources to provide necessary learning opportunities to their students.

Communication between FWS and the various elements of the community, however, was judged to be less than adequate. Resources complained of inadequacy in the dialogue with FWS concerning the results of their interactions with students; parents complained of the relative lack of meetings with staff and infrequent reports on the progress of their sons/daughters. As a result of these findings, a resource analyst was added to the instructional staff and staff-development sessions were held during the summer in which emphasis was placed on staff-resource and staff-parent communications.

FWL EVALUATION FOR SCHOOL YEAR 1974-75

So much for the evaluation last year. The principal concern of this report is the evaluation of the year 1974-75, looking forward to information needs in implementing the FWL-EBCE model in new districts.

There are three principal audiences for FY75 evaluation information: (1) potential adopters of the FWL-EBCE model, (2) staff already working to implement the FWL-EBCE model in adopting districts in FY76 and (3) the educational research community.

A variety of questions are explored for those considering adoption--e.g., what does the program do for students; what are the logistical problems and costs involved in implementation; what is FWL-EBCE's history of retaining students; what are the ongoing requirements for participating resources; how do students perceive the program; what are the unique requirements for EBCE staff? Information for staff already implementing the model is intended to provide an understanding of model operations, while also giving the basis for refinements in operating procedures and materials.

Three types of information are developed in this report: evidence related to student accomplishment; analyses of the utility of program elements; and evidence showing the degree of acceptance by certain self-selected school districts. The first type of information will answer those questions concerning the program's capability for helping high school age students; the second will answer questions concerning the feasibility of implementation in various

educational/cultural/economic environments; the third will answer those questions concerning acceptability of the program to various groups who have a stake in secondary education.

ORGANIZATION OF REPORT

Chapter II of the report contains a description of the overall evaluation design, including a listing of data collection sources, procedures, and instruments.

Chapter III, Student Population, defines the composition of participating groups, i.e., returning students, entering students, controls, and graduates. Attrition during fall and spring is reported.

Chapter IV, Program Use and Effects, contains information on student plans, perceptions and attitudes, differential use of program features, and relations among student characteristics, program features, and program outcomes.

Chapter V, Program Implementability, deals with procedures for assuring adherence to the model, plans for continuation of Far West School in Oakland, feasibility of adoption of FWL-EBCE model in different districts, and factors identified as critical in adopting the model.

In Chapter VI is a brief summary of findings contained in the report.

CHAPTER 2:

Design and Instrumentation

CHAPTER II: DESIGN AND INSTRUMENTATION

The overall design of the evaluation for the year 1974-75 was influenced by the requirement for both an internal (FWL) and an external (ETS) evaluation. Agreements were made that the design should include both traditional features and those more suited to the innovative and individualized nature of the EBCE program. Methods therefore ranged from use of experimental and control groups in a pre-post design to use of anthropologists as participant observers in the school describing the student's eye-view of the program.

Table II-1 lists the instruments used in both the internal and external evaluations, and contains the source of the collected data, the period of collection, and designation of who was primarily responsible for conducting the analyses and reporting the results.

Items 15 through 22 in the table are reserved for treatment in the Educational Testing Service report, scheduled for completion in November. For instruments 1 through 5 as well as 10, 11, 15 and 22, treatment of the data is possible through use of traditional features of experimental-control groups and/or pre-post comparisons. Other instruments have a variety of design features that will be indicated later. The instruments and methods appearing in Table II-1 are described in the remainder of this chapter.

Of the 96 Far West School students participating at year end, there were fifty-eight randomly-selected entering (experimental) students, 20 non-randomly selected entering students, and 18 returning students. There were also 64 students in a control group made up of a random sample of applicants. Detailed descriptions of the experimental, control, and sub-groups of FWS students are given in Chapter III.

DESIGN WITH TRADITIONAL FEATURES OF EXPERIMENTAL-CONTROL GROUPS AND/OR PRE-POST DATA COLLECTION

The recruitment and selection procedures for the experimental and control groups are described in Chapter III. Characteristics of applicants and entrants to Far West School (Fall 1974) are discussed in that chapter and further in Appendix A. Among the questions explored there are: What are the characteristics of the applicants to FWS? How representative were they of the school

TABLE II-1

DATA COLLECTION AND REPORTING PLAN

	Instrument/Method	Group*	When Collected	Data Treated Primarily in	
				FWL Report	ETS Report
1	FWS Application Form	Entering/Control	Pre	X	
2	Student Background Summary	FWS	Pre	X	
3	Student Plans & Activities Summary	FWS/Control	Post	X	
4	School Perceptions Survey	FWS/Control	Post	X	
5	FWS Perceptions Survey	FWS	Post	X	
6	Graduate Questionnaire	'72-'74 FWS Graduates	Post	X	
7	Student Activity Report (FWS)	FWS	Sept-June (weekly)	X	
8	Rating of Student's Participation	FWS	Post	X	
9	FWS Student Files	FWS	Feb/June	X	
10	Job-Related Attitudes	FWS/Control	Pre/Post	X	
11	Job-Related Terms	FWS/Control	Pre/Post	X	
12	Attitudes Toward Tests	FWS/Control	Pre	X	
13	Student Activity Reports (Fresno)	Edison Program	Apr/July (weekly)	X	
14	Pre-adopters' Workbook	LEAs (sample)	Oct/Feb	X	
15	Comprehensive Tests of Basic Skills	FWS/Control	Pre/Post		X
16	ETS Staff Observations of Students	FWS (sample)	Nov/Apr		X
17	Parent Questionnaire	FWS	Post		X
18	Resource Interview	Resources (sample)	Post		X
19	Ethnographic Observations	FWS	Oct-June		X
20	Project Staff Interviews	Management	Mar/July		X
21	Former Student Interview	'74-'75 FWS Withdrawals	Post		X
22	In-depth Student Interview	FWS (sample)	Post		X

* FWS - All students enrolled at Far West School.
Entering - Students at Far West School who first enrolled in Fall, 1974.
Control - Applicants to FWS for the 1974-75 year, excluded by the random selection process, but participating as a control group.
Edison Program - Students in the EBCE program implemented in Fresno's Edison High School.
LEAs - Representatives of local educational agencies evincing interest in the FWL-EBCE model.
Resources - Those persons serving as learning resources for FWS students.
Management - Project Director, Deputy Director, Evaluation Director, FWS Director, Development Director.

population from which they were drawn? Where did they learn about FWS? What was the attrition among students at FWS during the 1974-75 school year?

Chapter IV contains the analysis of results from data collected via instruments 1-12 identified in Table II-1.

Instruments from which comparative data are available on the experimental and control groups are shown in Table II-1. They include: 15 and 16 from the ETS group and 1, 3, 4, 10, 11 and 12 from the remaining listed instruments. In addition, certain other instruments permit a pre-post comparison of items, but since they are EBCE-specific, they do not permit a comparison with the control group.

PLANS AND PERCEPTIONS OF STUDENT GROUPS

In Chapter IV results are presented on the plans and perceptions of students. The major questions explored in that section are: Why do students attend FWS? What are the attitudes and perceptions of students toward their learning and their school? Have students perceived self-changes during the year?, and What are students' long-term and short-term plans for their education and careers?

Instrumentation

1. FWS Application Form. Application content includes name and address of applicant and parents/guardians, birthdate, sex, name of previous school, grade at date of entry, source of information about FWS, free-time activities, and future plans.
2. Student Background Summary. The SBS collects pretreatment data on student's ethnic background, work history, parents' educational background, entry-level attitudes toward school and learning, long- and short-term (post high school) plans, and reasons for applying to FWS.
3. Student Plans and Activities Summary. This instrument collects end-of-year information on student's long- and short-term (post high school) plans, career planning, activities/interests, and paid employment during the year.
4. School Perceptions Survey. It collects end-of-year comparative data

from FWS and control students about their attitudes toward their respective school programs; it includes ratings of school helpfulness, likes and dislikes for program, and perceptions of self-change.

5. FWS Perceptions Survey. This instrument consists of end-of-year ratings of FWS activities, objectives and program characteristics. It also asks the students for reasons for attending FWS.

6. Graduate Questionnaire. The instrument consists of ratings of FWS features, and questions about current activities and future plans.

Collection Procedure

Instrument 1 was used as described; instrument 2 was part of the pre-treatment package administered to FWS students in late September and to control-group students in early October. Instruments 3, 4, and 5 were given as post-treatment instruments to FWS and control students in April and May, 1975, respectively. The Graduate Questionnaire, instrument 6, was mailed out to graduates of FWS with known addresses in June, 1975. Graduates were paid $5 for completing and returning the form.

DIFFERENTIAL USE OF PROGRAM FEATURES

Results are given in Chapter IV on how the students made use of different facets of the program. The major questions explored in that connection are: How did students distribute their time in the program, i.e., what was the differential participation? How were credits earned? What do students see as the most successful features of the FWS program? Do students who ask for special help feel that they have been helped?

Instrumentation

7. Student Activity Report (SAR)-FWS. This is a weekly self-report on activities undertaken by the student. The report covers use of external resources, project planning and preparation, supplementary curriculum activities, and physical education.

8. Rating of Student's Participation. The instrument consists of ratings of the student by a knowledgable staff member as above or below FWS

group median on each of two dimensions: use of external (at employer site) resources; and use of center (internal) resources.

9. FWS Student Files: Credits, Explorations, Supplementary Curriculum Enrollment. A systematic compilation of end-of-semester FWS documentation on student learning activities and credit earned.

Collection Procedure

The SAR, instrument 7, was collected weekly from students; weekly and cumulative means of resource time and overall program time were compiled. Instrument 1 was completed by the Learning Coordinators in June (see Chapter IV). Analyses of selected items from student files (item 2) were completed after each school semester.

DIFFERENTIAL EFFECTS ON STUDENTS

Chapter IV presents analyses of relationships among student characteristics, treatment variables, and outcome variables. The major question of interest is: How are different kinds of students affected by FWL-EBCE opportunities and treatments?

Instrumentation

10. Job Related Attitudes. This instrument taps students' attitudes toward the economic sector by asking students to rate a number of job-related statements. Twenty-three items have been grouped into four clusters related to such concepts as attitudes, facts, and events related to the business world, and commitment to a career.

11. Job Related Terms. This instrument measures the assimilation of business-related terminology. Students are asked to match words with definitions. The content includes business environment and procedures, production and distribution processes, business-role nomenclature, and basic financial concepts.

12. Attitudes Toward Tests. The test is designed as a measure of test resistance. Students are asked to state agreement or disagreement with a series of test-related statements.

Collection Procedure

Instruments 10 and 11 were administered to FWS and control students as parts of both pre- and post-treatment data collection. Item 20 was administered to both FWS and control students as part of pre-treatment collection.

MODEL IMPLEMENTABILITY

Evidence is presented in Chapter V concerning two questions: How faithful to the FWL-EBCE model design was the FWS program? Can the FWL-EBCE model be implemented elsewhere?

Instrumentation

13. Student Activity Report (SAR)-Fresno. This is a weekly self-report of activities undertaken by the student. It covers use of external resources, project planning and preparation, basic-skills workshops, and advisor/student meetings.

14. Pre-Adoption Workbook. An instrument was designed to develop a district-specific scenario for FWL-EBCE adoption, considering factors of district demography, existing instructional programs, history of innovation, likely support of constituencies, conditions in the district that might facilitate or hinder adoption, and philosophical acceptability of FWL-EBCE.

Collection Procedure

The SAR (item 13) was collected weekly from students in the Edison EBCE during the spring and summer terms; weekly and cumulative means of reported resource time and overall program time were compiled. The Workbook (instrument A) was completed by representatives of invited school districts during a series of week-long workshops at FWL held during Fall, 1974.

15. Comprehensive Test of Basic Skills (CTBS). This is a standardized instrument published by McGraw-Hill. Three subtests were used: reading comprehension, arithmetic concepts, and arithmetic applications.

EXTERNAL EVALUATOR INSTRUMENTATION (To be reported by ETS in November, 1975)

16. ETS Staff Observations of Students. This is an observation of a number of randomly-selected students at their normal FWS activities by ETS staff: at resources and in the learning center. The staff members accompanied the students to their resource-site activities, and in general were unobtrusive in their observation and documentation.

17. Parent Questionnaire. This is an end-of-year mail-interview probing the extent of parents' knowledge of FWS and the perceptions of its impact upon their son/daughter. A telephone follow-up was made to non-respondents.

18. Resource Interview. This is an end-of-year telephone interview designed to elicit information on the reasons for resource participation, personal benefits from participation, type of activities with students, perceptions of student accomplishment, and plans for future participation.

19. Ethnographic Observations. A pair of graduate anthropologists spent considerable time "living" among the FWS students. A "model-free" presentation of the learning modes and attitudes at FWS is the resulting documentation.

20. Project Staff Interviews. An ETS staff-member interviewed FWL-EBCE senior staff to document lines of organization and task responsibilities in the project.

21. Former-Student Interview. A mail survey was undertaken among students withdrawing from FWS during the 1974-75 school year. The instrument includes reasons for withdrawing, perceptions of the school, and plans for the future.

22. In-Depth Student Interview. ETS staff conducted a lengthy, end-of-year interview with FWS students concentrating on their development of career knowledge, and the extent of their career planning.

CHAPTER 3:

Students

CHAPTER III: STUDENTS

INITIAL STUDENT POPULATIONS

Entering Students

Recruitment. The purpose of Spring, 1974 recruitment was to obtain a pool of eligible applicants large enough to provide the student body for a performance test of the FWL-EBCE model, and to implement the experimental-control groups design for student outcomes evaluation. Eligibility for FWS was based on simple criteria: residency in the City of Oakland; completion of the ninth grade but having at least one full year of high school before graduation; and no more than two units deficiency from proper grade level.

Recruitment efforts were aimed at two goals: giving every student in grades nine through eleven in the Oakland Unified School District (OUSD) an opportunity to learn about Far West School; and providing interested students sufficient information about the School to allow them to make informed decisions about whether or not to apply for admission. To accomplish these goals, the following actions were taken:

1. Presentations were conducted by FWS students and staff at each junior and senior high school. The structure and objectives of Far West School were explained, experiences in the School were described, invitations were given to attend follow-up presentations at Far West School, and questions asked by the audience about EBCE were answered.

2. Posters describing Far West School and telling how and where interested students could learn more about the School were displayed in junior and senior high schools, businesses, and community recreation locations.

3. Three one-hour information sessions were conducted at the Far West School on the afternoons of May 13th, 14th, and 15th, 1974 to give interested students and their parents information about the objectives, structure, and activities of FWS; to provide them an opportunity to see FWS facilities; to meet FWS staff members and students; and to ask questions about the school.

The first high school presentation was conducted on May 2, 1974 and the last on May 14, 1974. There were a total of nineteen presentations, each lasting an hour and scheduled and conducted during normal school hours. Table III-1 reflects the size of schools at which presentations were made, the number and percentage of students attending each presentation, and the number of students

TABLE III-1

PRESENTATIONS AT JUNIOR AND SENIOR HIGH SCHOOLS

School			Students Attending Presentation	
Level	Code	Size	Number	Percent
Senior High	A	2,341	130	5
	B	2,204	23	1
	C	2,054	40	2
	D	1,495	-*	-
	E	1,428	4	<1
	F	852	18	2
	Subtotal	10,374	215	2
Junior High	G	365	65	18
	H	362	135	37
	I	354	354	100
	J	342	250	73
	K	331	250	76
	L	329	-**	-
	M	321	321	100
	N	315	39	12
	O	308	150	49
	P	276	225	81
	Q	223	60	27
	R	219	25	11
	S	168	160	95
	Subtotal	3,913	2,034	52
	TOTAL	14,287	2,249	16

* Data not collected.

** The Vice Principal failed to schedule the presentation (cooperation was satisfactory and failure was attributed to a demanding workload).

applying during or immediately after each presentation. The overall percentages of the student body attending school presentations at junior high schools (range: 11% to 100%) was significantly higher than the corresponding percentages attending at senior high schools (range: 1% to 5%). While 52% of the total junior high school population attended presentations about FWS, the figure for the senior high school population was only 2%. Table III-2 shows the number and percentage of students from the senior and junior high schools who attended presentations at their schools, requested information about FWS, and/or applied for admission to Far West School. Table III-3 shows the relative distributions (by sex and grade level) of students who applied from the junior and senior high schools.

TABLE III- 2

APPLICATIONS RESULTING FROM SENIOR AND JUNIOR HIGH SCHOOL PRESENTATIONS

Item	Oakland Unified School District			
	Senior High N = 10,347		Junior High N = 3,913*	
	N	%	N	%
Students attending school presentations	215	2.0	2,034	52.0
Students requesting additional information after school presentations	79	0.8	773	20.0
Applications received as of 6/1/74**	97	0.9	171	4.3

* 9th grade students

** Does not include applications from students enrolled in schools where presentations were not made or those from students not enrolled in OUSD.

TABLE III- 3

APPLICANTS* TO FWS BY SCHOOL, SEX, AND GRADE LEVEL

School Level	School Code	Applications Received		Sex		Grade Level			
		Number	Percent**	Male	Female	9	10	11	Blank
Senior High	A	28	1	9	19		11	17	
	B	27	1	11	16		13	14	
	C	15	1	9	6		10	5	
	D	5	1	2	3		4	1	
	E	7	1	3	4		3	3	1
	F	11	1	2	9		7	4	
Subtotal		93		36	57		48	44	1
Junior High	G	4	1	3	1	4			
	H	19	6	7	12	19			
	I	13	3	5	8	13			
	J	8	2	3	5	8			
	K	6	2	2	4	6			
	L	6	2	2	4	6			
	M	14	4	4	10	14			
	N	34	11	14	20	34			
	O	15	5	4	11	15			
	P	26	9	10	16	26			
	Q	5	2	2	3	5			
	R	7	3	1	6	7			
	S	11	6	7	4	11			
Subtotal		168		64	104	168			
Other Schools	T	16		3	13	8	3	5	
Not in School	U	8		3	5	1	5	1	1
Subtotal		24		6	18	9	8	6	1
TOTAL		285		106	179	177	56	50	2

* As of 6/1/74.

** Percent of population shown in Table III-1.

Three afternoon presentations were held at FWS so that parents of interested students could hear about and see FWS. Table III-4 shows the number of

TABLE III-4

ATTENDANCE AT INFORMATION SESSIONS HELD AT FWS

Item	Dates of Sessions			Total
	5/13/74	5/14/74	5/15/74	
Number of students attending session	41	46	45	132
Number of parents attending session	10	16	18	44
TOTAL	51	62	63	176

students and parents attending these sessions. The sessions were attended by forty-four parents and 132 students. Many parents asked questions of FWS staff; several used the opportunity to tour the school and ask in-depth questions about such matters as curriculum content, college acceptance of credits, and ability of the student to return to regular school. Approximately one-third of the 132 students who attended the sessions at Far West School had already applied for admission but were seeking further information about FWS. Almost one-half of those attending each session applied immediately after the session. Some (about five percent) submitted applications by mail subsequent to the information session. Only 15% of students who attended the sessions at FWS did not submit applications to FWS. Table III-5 summarizes the outcome of each of the three sessions held at FWS.

TABLE III-5

APPLICATIONS RECEIVED AT INFORMATION SESSIONS HELD AT FWS

Item	Dates of Sessions			Total
	5/13/74	5/14/74	5/15/74	
Number of students applying during or immediately after session	14	25	22	61
Number of students applying before session	18	13	13	44
Number of students who did not apply during or immediately after session, but applied later	1	3	3	7
Number of students who did not apply	8	5	7	20
TOTAL	41	46	45	132

It is clear that the recruitment campaign was more successful in junior high schools than in senior high schools (see Table III-2). The following hypotheses may account for the greater success of junior high school recruitment:

1. Students graduating from a junior high school are at a normal decision-point and may be more receptive to educational alternatives than senior high-school students who would have to interrupt their programs and transfer out of one school into another.

2. Some senior high school staff members felt that FWS might draw away some of their better students, thus making their jobs personally less rewarding and also possibly reducing the number of available teaching positions. These fears obviously would not be present in the junior high schools, where ninth graders were leaving through graduation in any case.

As of the date of selection, 313 students had submitted applications to FWS. Table III-6 compares these applicants to FWS with the total high school population, using several demographic variables. Differences are noticeable in grade level (FWS applicants are mostly sophomores), gender (there is a higher percentage of females in FWS applicant pool), and socio-economic classification* (the FWS recruitment campaign was relatively more successful at the schools located in areas having lower average family income).

Selection. The purposes of selection were to choose the new students who, with those returning students from 1973-74, would comprise the 1974-75 FWS student body, and also to form the experimental and control groups to be used by FWL-EBCE in the evaluation of student outcomes. Goals were to: (1) select a group of students ("experimental") for entry into FWS that would be representative of the group of eligible applicants; (2) select a sufficient excess of applicants over the necessary quota to allow for attrition; (3) construct a control group that would also be representative of the applicant group; and (4) enable each FWS applicant to be sure that the selection process was fair and unbiased. To accomplish these goals, the following actions were taken:

1. The transcripts of all applicants applying to FWS by June 10, 1974 were examined by the OUSD Liaison staff member and those applicants deemed ineligible for selection were removed (two applicants were judged ineligible because their residence was outside the Oakland Unified School District; thirteen applicants were judged ineligible because they were deficient in more than two units of credit or did not complete junior high school requirements).

2. Siblings of current students were removed from the applicant group and placed in special status because their suitability as control members was questionable. (Twelve siblings were removed from the applicant pool to be treated as special cases.)

3. The remaining group of eligible applicants was separated into three sub-groups according to grade level. Each of these three groups was to be treated as a separate group for random selection. This approach was taken to assure sufficient representation of the relatively small groups of incoming juniors and seniors in the random selection process.

*The three high schools comprising Group I had a student population with lower family income than the three high schools comprising Group II.

TABLE III-6

DEMOGRAPHIC PROFILES OF 1974 FWS APPLICANTS AND OAKLAND HIGH SCHOOL STUDENTS

Variable	Value	FWS Applicants N=313 %	OUSD Population N=10,347 %
Grade level	10	65	38
	11	18	36
	12	17	26
Sex	Male	38	45
	Female	62	55
High school SES*	I	54	47
	II	45	53
High School	1	21	20
	2	16	15
	3	16	7
	4	18	19
	5	12	15
	6	13	20
	7	1	3
	8	0	2
	Other	2	0

* I - High schools of lower average family income.
II - High schools of higher average family income.

4. The selection process was structured as a public lottery (actually three lotteries, one for each grade level of applicants). All potential students were informed of this procedure during the recruitment messages. Letters were sent to all eligible applicants one week in advance of the lottery inviting them to observe the process. Representatives of the Oakland Schools, the FWS Policy Advisory Board, and the FWL Administrative Office were also invited. The lottery was conducted on June 10, 1974. With over 50 potential students present, along with several interested parents, an OUSD liaison officer and a representative of FWL's administrative office verified the objectivity of the process.

5. At each grade level students were selected in proportion to the representation of this grade level in the applicant pool. FWL-EBCE staff decided to select a total of 100 students for entry; this figure provided an excess of 30 students over the 70 required by NIE program guidelines to serve as a buffer against attrition. (Reselection is undesirable because it confounds the problem of selecting a control group from the pool of applicants).

6. Seventeen additional students were chosen randomly and tagged as selection alternates as a contingency should enrollment fall below the 70 desired.

7. Upon completion of the selection process, each of the 100 students selected was notified of his status by mail and asked to return an Authorization for Attendance (required by OUSD) signed by his/her parent or guardian. Not all students selected accepted entrance into FWS. (See discussion of the experimental students later in this chapter.)

8. Applicants not selected by the lottery were designated as potential control group members and asked to participate in a series of "information exchange" sessions. (For a discussion of the construction of the control group, see a later section of this chapter.)

9. Applicants who were siblings of current FWS students were accepted into the program.

Demographic data comparing the applicant pool with the randomly selected experimental and control groups are presented in Table III-7.

One very interesting finding emerged from these procedures: random selection of students greatly simplified the problem of choosing among applicants. It seems appropriate to use random selection of students for entry into such a program whenever the number of applicants greatly exceeds the number of openings. This method, which on the surface looks quite callous, in practice may well be the most equitable means of selection. It is difficult to postulate a method of screening prospective students who have widely varying degrees of previous educational and social opportunity that would be equally impartial.

TABLE III-7

SELECTEES, NON-SELECTEES, AND APPLICANT POOL COMPARED
BY PERCENTAGES ON THREE DEMOGRAPHIC VARIABLES

Group	N	Sex		Grade Level			Previous High School*								
		M %	F %	10 %	11 %	12 %	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %	Other %
Selectees (experimental)	117	37	63	65	18	17	18	17	0	18	14	18	14	1	1
Non-selectees (control)	170	38	62	65	17	17	22	17	0	18	10	11	18	1	4
Applicant Pool	287	38	62	65	18	17	21	16	0	18	12	13	16	1	2

* Tenth graders are classified according to the high school in whose attendance area they reside.

Enrollment.

Experimental Students. Sixty-four of the 100 selected experimental students registered in FWS during the first week of the fall semester. Because this figure was less than the desired number of 70, the 17 students selected in June as alternates were contacted and invited to enroll. Eight accepted; seven of them finally did enter FWS. Thus the number of experimental students was 71 at the end of the second week of the semester.

For new students, the first three weeks of FWS involved an orientation to the structure and objectives of FWS. Some withdrawals from the school were expected during this period; and in fact, seven of the 71 experimental students (ten percent) did return to their regular high schools during orientation. (No students withdrew completely from high school). At the end of the three-week orientation, 64 experimental students were enrolled in FWS. Table III-8 presents a demographic profile of that group.

Other Entering Students. Eleven siblings of 1973-74 FWS students enrolled in FWS; in addition, four members of the 1973-74 control group who desired entry into FWS were accepted outside the random-selection mechanism. Finally, an additional five students were admitted for various administrative reasons. Of these twenty special entering students, none withdrew during orientation. Table III-8 includes a demographic profile of those twenty non-randomly selected students.

Control Students. In June, the unselected applicants were notified of their status and invited to attend a series of "information sessions" during the next school year in which their attitudes and interests would be assessed and where they would be provided with information on the future of FWS. They were offered a payment of $6 for each session. Ninety-three of the potential one-hundred seventy members indicated an interest in the sessions. Eighty-eight students actually attended the October, 1974 control session (students were given a choice of three sessions). The demographic profile of this group is contained in Table III-8.

Returning Students

Twenty-four of 29 non-graduating students from the previous year returned

TABLE III-8

DISTRIBUTION OF INITIAL POPULATIONS ON THREE DEMOGRAPHIC VARIABLES

Student Groups	N	Sex		Grade Level			Ethnic Group					
		Male	Female	10	11	12	American Indian	Asian	Black	Spanish Surname	White	Other
Total FWS	108	44	64	47	33	28	1	1	49	8	44	5
Returning	24	10	14	0	14	10	1	0	5	1	17	0
Non-random Entering	20	7	13	7	5	8	0	0	5	3	12	0
Entering Experimental	64	27	37	40	14	10	0	1	39	4	15	5
Participating Control	88	29	59	57	19	12	0	1	67	2	14	4

to FWS for the Fall, 1974 semester. Except for one female student who entered in 1972, these students were recruited in 1973.* (The demography of this group is shown in Table III-8). Note that the group has only juniors and seniors, is relatively balanced between the sexes, and is weighted toward white students. This group is markedly dissimilar in grade level and ethnicity from the group of "experimental" students.

Reasons That Students Give For Attending FWS

During pretesting students were presented with a multiple-choice question that listed a set of reasons for attending FWS. The students checked the three most important reasons, for them, for attending the FWS. Table III-9 shows the percentage of students responding to each alternative. The most frequently selected reason for attending is to find out about careers, mentioned by 56% of the total group. The next most frequently given responses were to get into a program that was different from regular school and to have more individual attention. A less commonly selected reason (mentioned by 28% of the students) was to have learning activities outside of the school. Although providing job training is not a goal of the FWL-EBCE program, it was checked by 23 percent of the students.

ATTRITION OF STUDENTS

During the 1974-75 school year, enrollment in FWS decreased from 108 to 96. Two FWS (returning) students were graduated at mid-year; two new students were admitted at that time. Of the 12 students who withdrew from FWS (excluding the two mid-year graduates), six were from the "experimental" group, two were from the entering group of "special cases," and four were from the group of returning students. Most students who withdrew from FWS returned to traditional high school programs. However, four students dropped from high school altogether during the year: two experimental and two returning students. Because of continued low program participation, the two experimental students were urged

*See Final Evaluation Report, FY 1974 for a discussion of the recruitment and selection process used in 1973.

TABLE III-9

REASONS FOR ATTENDING FWS - SUMMARY OF THREE REASONS, RANKED FOR TOTAL GROUP

Item	FWS Returning N=15 %	FWS Entering N=72 %	FWS Total N=87 %
1. To find out about careers	67	54	56
2. To have more individual attention in my school program	67	44	48
3. To get into a program different from regular school	47	44	45
4. To have learning activities ouside of school	33	26	28
5. To get job training	13	25	23
6. To receive counselling about what to do after I finish school	27	22	23
7. To get help in finding a job	13	19	18
8. Other	13	3	5
9. To make new friends	0	3	2

by FWS staff to return to regular high school; however, it was later found that they did not re-enroll there. The two returning students who also dropped did so after a period of low participation at FWS (one because of low school interest, the other because of injuries sustained in a serious automobile accident). These two students decided to take the GED examination and to seek further education in vocational schools. Table III-10 summarizes data on student attrition from FWS.

TABLE III-10

ATTRITION FROM FAR WEST SCHOOL DURING 1974-75 SCHOOL YEAR

Student Groups	N	Attrition					
		Total		Transfers		Dropouts	
		f	%	f	%	f	%
Entering Experimental	64	6	9	4	6	2	3
Other Entering	20	2	10	2	10	0	0
Returning	24	4	17	2	9	2	9
Total Enrollment	108	12	11	8	7	4	4

The dropout rate at FWS (after the orientation period) was 4%; among the randomly-selected group of entering students it was 3%. This low rate possibly is a result of the FWL-EBCE emphasis on informed decision-making on entering FWS by students themselves rather than by a screening of applicants by FWS staff. The students' decision on enrollment is facilitated by initial over-selection and an extensive FWS orientation period.

END-OF-YEAR POPULATIONS

Entering Students

Experimental Students. Fifty-eight randomly-selected entering students completed the school year. During the year considerable demographic information was compiled on these students (and on their counterpart controls). Table III-11 presents the distribution of the group (and the other student groups) on the variables sex, grade level, ethnicity, amount of previous work experience, father's education, and mother's education. It is noteworthy that

TABLE III-11

DEMOGRAPHIES OF END-OF-YEAR STUDENT POPULATIONS

Variable	Value	FWS Returning Group N=18		FWS Non-random Entering Group N=20		FWS Experimental Group N=58		FWS Total Group N=96		Control Group N=64	
		N	%	N	%	N	%	N	%	N	%
Sex	Male	7	39	7	35	24	41	38	40	21	33
	Female	11	61	13	65	34	59	58	60	43	67
Grade	10	0	0	7	35	36	62	43	45	42	66
	11	11	61	6	30	14	24	31	32	13	20
	12	7	39	7	35	8	14	22	23	9	14
Ethnicity	American Indian	1	6	0	0	0	0	1	1	0	0
	Asian	0	0	0	0	1	2	1	1	1	2
	Black	3	17	4	20	37	64	44	46	50	78
	Spanish Surname	1	6	2	10	5	9	8	8	1	2
	White	13	72	14	70	14	24	41	43	10	16
	Other	0	0	0	0	1	2	1	1	2	3
Previous Work Experience	None	2	11	3	15	12	21	17	18	23	36
	<3 full mos. or 6 part	6	33	5	25	19	33	30	31	18	28
	<6 full mos. or 1 yr. part	7	39	5	25	11	19	23	24	17	27
	<1 full yr. or 2 part	2	11	4	20	6	10	12	13	2	3
	>1 full yr. or 2 part	1	6	3	15	7	12	11	11	2	3
	Blank	3	3	0	0	0	0	3	5	2	3
Father's Education	Elementary School	0	0	0	0	1	2	1	1	3	5
	Some High School	0	0	1	5	14	24	15	16	10	16
	High School Diploma	5	28	5	25	13	22	23	24	17	27
	Some College	2	11	3	15	11	19	16	17	15	23
	College Degree	3	17	8	40	7	12	18	19	3	5
	Some Grad. Work	1	6	0	0	0	0	1	1	3	5
	Graduate Degree	3	17	1	5	1	2	5	5	3	5
	Other	3	17	1	5	5	9	9	9	5	8
	Blank	1	6	1	5	6	10	8	8	5	8
Mother's Education	Elementary School	0	0	0	0	1	2	1	1	2	3
	Some High School	0	0	2	10	11	19	13	14	12	19
	High School Diploma	4	22	3	15	16	28	23	24	15	23
	Some College	5	28	8	40	10	17	23	24	15	23
	College Degree	5	28	5	25	8	14	18	19	5	8
	Some Grad. Work	0	0	0	0	2	3	2	2	3	5
	Graduate Degree	2	11	2	10	1	2	5	5	4	6
	Other	2	11	0	0	4	7	6	6	3	5
	Blank	0	0	0	0	5	9	5	5	5	8

the population of more than 60% sophomores (an outcome of the recruitment campaign, discussed earlier) corresponds ethnically to the Oakland high school population (OUSD high school population is 63% black, 22% white, 8% Spanish surname, 5% Asian, 1% American Indian) and comes from parents of whom one-half have at most a high school diploma.

Other Entering Students. Eighteen non-randomly-selected entering students completed the school year. Most of these were siblings from previously enrolled students, a few were control members during the previous year, and several were special administrative cases admitted during the Fall and Spring. This group was mostly white (72%), and a majority females (65%). Demographic data on this group are shown in Table III-11.

Participating Control Students. The control group was reconvened in May, 1975 for posttesting. Only those members who attended one of the October, 1974 pre-testing sessions were invited (88 students). Students were offered $10 for their time. Sixty-five students attended the posttesting (again students were given a choice of three sessions); however, data from one member were deleted because he had graduated at midyear and was attending college during the Spring. Table III-11 summarizes some demographic information collected for this group.

By applying the chi-square test there is revealed to be no significant differences (at the .10 level) between the groups of experimental participants and control participants on the demographic variables of Table III-11, with the exception of "previous work experience."

Returning Students

Eighteen returning students completed the year at FWS. This group was quite unlike the group of entering students* (as was mentioned previously in discussing initial populations); the returning group was older, mostly whites, had (on the average) more previous job experience, and had parents averaging more education. The demographic profile of the group of returning students is presented in Table III-11.

1975 FWS Graduating Students

Twenty-two students graduated from FWS in June, 1975; additionally, two students graduated mid-year, in January, 1975. These students included, in

*The group of non-random entering students, a majority of whom are siblings of previous FWS students, does closely resemble the group of returning students.

addition to the 22 twelfth graders enrolled, two eleventh graders who amassed sufficient credits to graduate a year ahead of schedule. Nine of the graduating students are male; fifteen are female. At their exit, newly graduating students were asked their plans for school/work during the next year. Table III-12 aggregates their responses by the following content categories: continue education full-time; continue education nearly full-time but work part-time; work nearly full-time but continue education part-time; work full-time. Of the 23 responses, 22 graduates plan to continue their education; 19 of them as their primary plan.

TABLE III - 12

RESPONSES ON FUTURE PLANS BY
TWENTY-FOUR 1975 FWS GRADUATING STUDENTS

Response	Frequency
College fulltime	10
College, but work part-time	3
Trade school, but work part-time	1
Work, but college part-time	3
Work fulltime	1
No response	1

PREVIOUS FWS GRADUATES

Prior to the 1974-75 school year, 32 students had graduated from high school through FWS. In 1972-73 there were nine graduates; in 1973-74 there were 23 graduates. Table III-13 summarizes the distributions of the graduates by sex and ethnicity.

TABLE III-13

FWS GRADUATES PRIOR TO THE 1974-75 SCHOOL YEAR

School Year	N	Sex		Ethnicity					
		Male	Female	American Indian	Asian	Black	Spanish Surname	White	Other
1972-73	9	5	4	0	0	4	2	3	0
1973-74	23	12	11	0	1	5	6	11	0
Total	32	17	15	0	1	9	8	14	0

SUMMARY

It was the intent of the FWL and NIE to execute a performance test of the FWL-EBCE model during school year 1974-75 with an enrollment of approximately 100 students. With a potential of 29 returning students and commitments to several FY73-74 control students, the recruitment and selection of some 70 new students was undertaken. That campaign was designed to facilitate the 1974-75 outcome evaluation through the construction of experimental and control groups. At the end of the orientation of new FWS students, a student body of 108 was enrolled at FWS: 24 returning students and 84 newly entering students. Of the entering students, 64 were the result of random selection during the Spring, 11 were siblings of 1973-74 FWS students, four were cooperating control OUSD students during 1973-74, and five were special administrative cases. A control group was formed with 88 participants from the 170 unselected students. The demographies of these sub-populations are shown in Table III-8.

During the school year enrollment at FWS decreased from 108 to 96. Fourteen students left FWS; two new students were admitted at midyear (two students graduated at midyear). Most students who left FWS returned to their regular high school; only four FWS students dropped out of high school during the year.

The FWS experimental group contained 58 (out of an initial 71) students at year-end. The control group was reconvened for year-end posttesting; 65 out of the initial 88 students participated. The demographies of the two groups show significant differences (at the .10 level) in distributions on only "amount of previous work experience." Table III-11 summarizes demographic information on the student groups.

Twenty-four students graduated from FWS during the year. Twenty-two of these students plan on continuing their education, twelve of them while working concurrently. One student plans no further education. One student did not indicate her plans.

Thirty-two students graduated from FWS prior to the 1974-75 school year. A partial demography of this group is shown in Table III-13. These students are referred to in several analyses of Chapter IV.

CHAPTER 4:

Program Use and Effects

CHAPTER IV: PROGRAM USE AND EFFECTS

Chapter IV is concerned with the program's effects on students. Three sections take the reader from comparisons of FWS students with those in other programs, through descriptions of differential program use by FWS students, to a study of the relationship among FWS student characteristics, treatment variables, and effects.

The first section of Chapter IV is concerned with plans and perceptions of student groups. Information was collected at the beginning and end of the school year through self-report questionnaires. Included in this section are data comparing the experimental and control groups. Two other groups are included in most comparisons: returning students who are in their second year in the program and 1973 and 1974 program graduates who responded to an end-of-year mail questionnaire.*

Data on student perceptions cover two major areas: attitudes toward school and learning, and perceptions of self-change. Included in the portion on school and learning are opinions of the FWS program by FWS students. The presentation on student plans is also divided into two parts; the first part gives information on students' long- and short-term plans, while the second part covers certain dimensions of career planning in student groups.

Chapter IV continues with a section on differential use of program features. Data in this section are based on the FWS population and were collected from FWS students and staff and from school records. Differential use of internal and external learning resources is discussed and related to credits earned. The relative success of a number of program features are presented through student ratings.

Information presented in the first two sections of the chapter is synthesized in the final section where 63 variables, many presented previously, are brought together in a descriptive, factor analytic study of relations among student characteristics, program treatments, and program effects.

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*Twenty-six of 34 graduates returned the mail questionnaire.

PLANS AND PERCEPTIONS OF STUDENT GROUPS

School-Related Attitudes and Perceptions

Usefulness of Current and Former School Programs. How did FWS and control students feel about their school programs? An initial estimate of student attitudes was obtained at the start of the school year by asking FWS and control students to rate their last-year's program. Comparisons of three groups is shown in Figure IV-1; returning students rated the FWS program in which they had been enrolled the previous year, while the experimental and control groups rated programs in other schools.

It can be seen in Figure IV-1 that the returning group rated the FWS program higher than other groups rated their program. In addition it can be noted that FWS experimental students had slightly higher means than the control students on each item; this may show a selection factor operating in those students still in the experimental and control groups after attrition. Although experimental students did have a slightly better feeling about their previous program than did controls, they generally resemble the controls more than the returning FWS students; t-tests comparing experimental and control group means showed no significant differences, while the returning students rated their program significantly higher than did experimental students in three of the five areas: preparing for work, post high school planning, and self-understanding.*

At the end of the school year FWS students and control students were asked to rate their current programs. Graduates of the 1973 and 1974 FWS programs were asked through a mail questionnaire in May, 1975 to rate the FWS program in which they had participated.

The data, presented in Figure IV-2, show that control students rated their program lower than did any of the FWS groups except on one item; they rated their program higher in college preparation than did experimental students and also saw college preparation as the way in which their school had been most helpful. FWS

*All t-tests in this section of Chapter IV were computed only for comparisons between the experimental group and each other group: these comparisons were considered to be both the most valid and of the greatest interest to the reader.

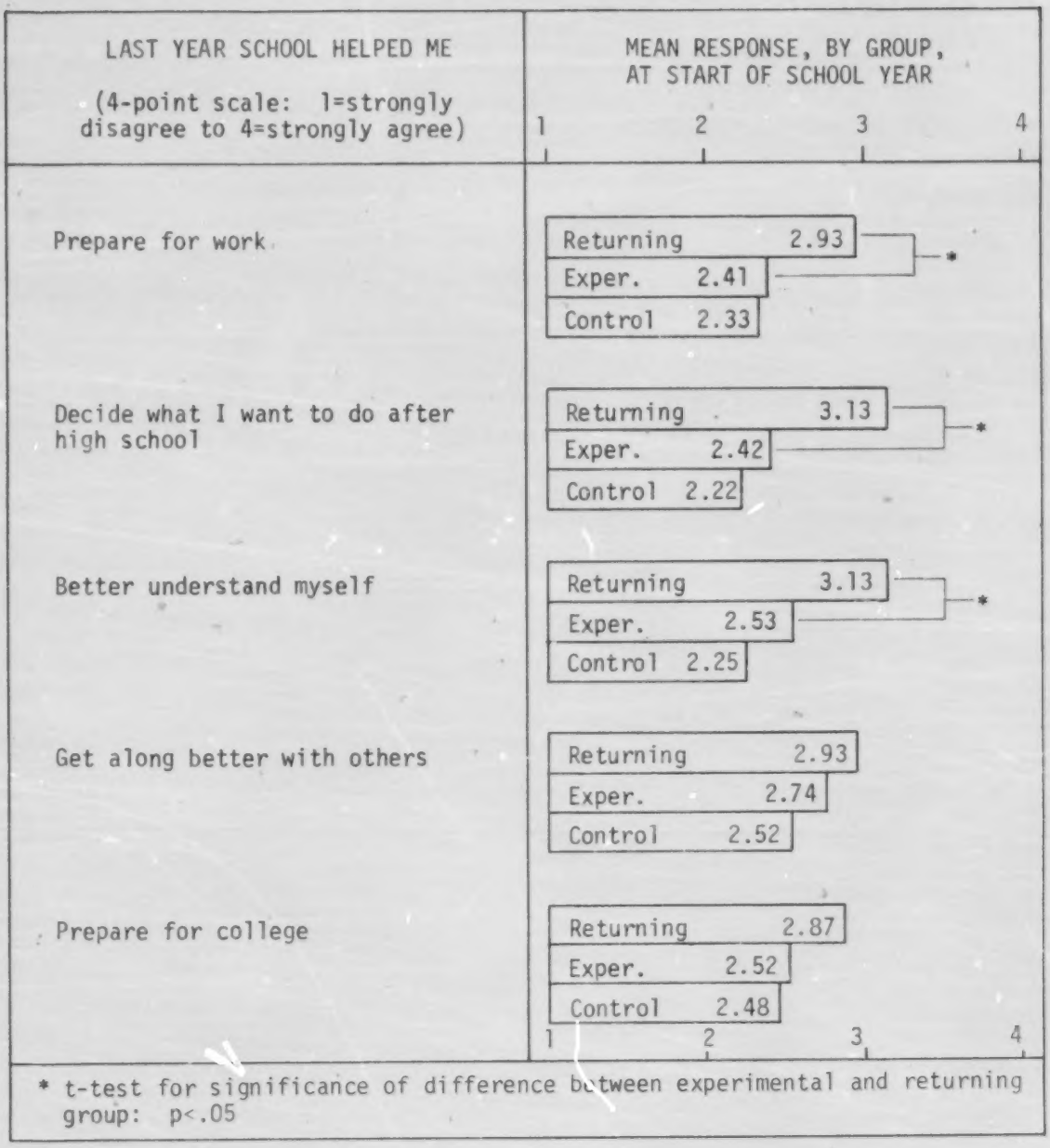


FIGURE IV-1

RATINGS OF FORMER PROGRAM BY FWS AND CONTROL STUDENTS

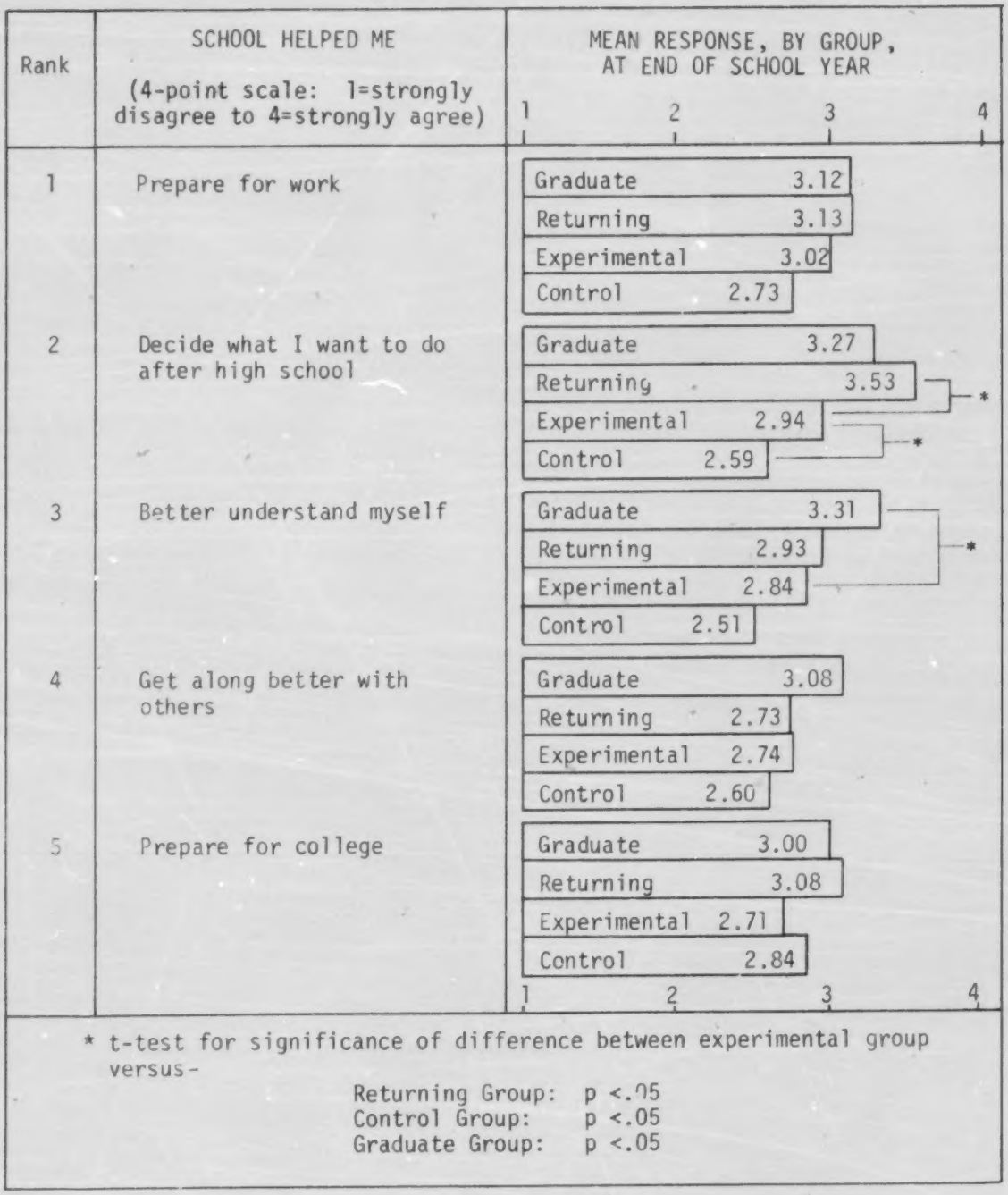


FIGURE IV-2

END-OF-YEAR RATINGS OF SCHOOL PROGRAM, RANKED BY MEAN OF EXPERIMENTAL GROUP

students felt the FWS program was very helpful in making post-high school plans; the FWS experimental group was significantly higher on this item than the control group. In addition returning students gave this item the highest mean rating of all the ratings in Figure IV-2. In summary, while all groups saw their programs as helpful in preparing for college and work, the FWS program was rated more highly in areas of personal growth and future planning.

In a more specific multiple choice question FWS and control students were asked to place their current school program in the proper category in relation to its value in career planning and academic work. Results are shown in Table IV-1.

TABLE IV-1

END-OF-YEAR ESTIMATE OF VALUE OF PROGRAM FOR CAREER AND ACADEMIC WORK

Value of Program	FWS Returning Group N=15 %	FWS Experimental Group N=56 %	Control Group N=64 %
Good both for planning a career and for academic work	67	68	33
Good mainly for planning a career	20	20	14
Good mainly for academic work	0	9	9
Not much good for either	0	2	27
Don't have a program	0	0	9
Blank	13	2	3
Chi-square test for experimental-control group comparison: $p < .01$			

More FWS students saw their program as good both for planning a career and academic work; however, most of the control students who liked their program also said it was good for both purposes. Few students felt their program was good mainly for academic work. One-third of the control group (36%) reported that their program was not much good for either, or that they did not have a program; only 2% of the FWS students had such negative opinions. The chi-square test for differences between the experimental and control groups was highly significant showing that FWS students feel their program is of greater value.

At the end of the school year FWS and control students were asked to rate the helpfulness of their school program in seven specific areas such as mathematics and self-expression. Table IV-2 compares the mean ratings for FWS graduates, returning, experimental, and control groups and indicates significant t-tests for comparison of the experimental group with other groups. The three FWS groups differed from the control group in ratings of the seven areas; FWS groups consistently rated their program higher in the areas of writing, self-expression, and meeting/dealing with people. Differences were significant between the experimental and control groups for self-expression and for meeting/dealing with people. Control students rated their program higher in mathematics and significantly higher in health/fitness. Little difference between groups was noted in reading or study habits. FWS ratings reflect FWS objectives; as was previously presented in Figure IV-2, FWS groups place more importance on self-growth (such as self-expression) and on interpersonal growth (meeting/dealing with people), while control group students emphasize traditional school subject areas.

Likes and Dislikes About Former and Current Program. Do students respond positively or negatively when asked to list likes and dislikes about their school program? At the start of the school year all students answered an open-ended questionnnaire item: "What do you think that you will like or dislike about school this year compared to last year?" The question was repeated at the end of the school year in the form, "What did you like or dislike about school this year?" Each student's answer was coded on a five-point scale on the basis of the preponderence of likes or dislikes from very negative (two or more negative items mentioned, no positive) to very positive (two or more positive items mentioned, no negative). Results are shown in Tables IV-3 and IV-4 with the five-point scale collapsed to three levels.

TABLE IV-2

STATISTICS FOR RATINGS OF HELPFULNESS
OF SCHOOL PROGRAM, RANKED BY EXPERIMENTAL GROUP MEANS

Areas of Program Helpfulness 3-point scale: 1 = not helpful to 3 = very helpful		Comparison Groups				Significant t-test Comparisons With Experimental Group,* Versus-	
		1973/1974 Graduates N=26	FWS Returning N=15	FWS Experimental N=56	Control N=64		
Meeting/Dealing People	Mean	2.81	2.67	2.61	2.28	Control	p<.01
	SD	.39	.60	.52	.71		
Writing	Mean	2.44	2.87	2.48	2.32	Returning	p<.05
	SD	.64	.34	.64	.68		
Self-Expression	Mean	2.77	2.73	2.48	2.20	Graduate	p<.05
	SD	.42	.57	.66	.78	Control	p<.05
Mathematics	Mean	1.72	2.00	2.36	2.46	Graduate	p<.01
	SD	.78	.73	.70	.71		
Reading	Mean	2.12	2.40	2.26	2.37		
	SD	.65	.61	.70	.61		
Study Habits	Mean	1.96	2.14	2.13	2.08		
	SD	.77	.83	.58	.76		
Health/Fitness	Mean	1.80	2.13	1.87	2.22	Control	p<.05
	SD	.85	.62	.71	.80		

* t-tests compared the experimental group with each of the other three groups. t-tests were not computed for other comparisons.

TABLE IV-3

BEGINNING-OF-YEAR LIKES AND DISLIKES ABOUT CURRENT AND PAST PROGRAM

Type of Response	FWS Returning Group N=15 %	FWS Experimental Group N=56 %	Control Group N=64 %
Negative	27	5	27
Neutral	7	9	9
Positive	53	64	48
Blank, not applicable	13	21	16
Mean of applicable responses (5-point scale)	3.54	4.16	3.39
SD	1.34	.88	1.30

t-test, experimental-control group comparison: $p<.01$

Control group members were relatively more negative about both the last year's and current year's programs; the experimental group appeared to have a more positive attitude toward school, which was in evidence shortly after entrance into the program. Figure IV-1, previously discussed, shows a similar pattern: control students had lower mean scores for ratings of former programs. Because experimental and control students were originally drawn from the same pool, it would be expected that they would have similar baseline responses. However, it appears that the existing control and experimental groups, after attrition, responded somewhat differently to attitudinal questions on former programs; those accepted into FWS were initially more positive while being rejected in the selection lottery may have strengthened negative attitudes toward school of other students.

When listing likes and dislikes about this year's program FWS experimental students mentioned likes far more often than dislikes. Only about one-half of the responding control students had positive reactions. Differences between the

TABLE IV-4

END-OF-YEAR LIKES AND DISLIKES ABOUT CURRENT SCHOOL PROGRAM

Type of Response	FWS Returning Group N=15 %	FWS Experimental Group N=15 %	Control Group N=64 %
Negative	67	11	27
Neutral	7	4	8
Positive	13	59	38
Blank, not applicable	14	27	28
Mean of applicable responses (5-point scale)	2.08	3.98	3.33
SD	1.00	.98	1.40

t-test, returning-experimental group comparison: $p<.01$
experimental-control group comparison: $p<.05$

experimental and control group, as measured by a t-test, were significant at both time intervals.

What did experimental and control students mention as likes and dislikes about their current program at the end of the school year?* Because the question required a constructed response by the student, the answers given were scattered over a number of categories. "Freedom" was mentioned by 25% of the experimental students but only 5% of control students. Other categories listed by over 10% of each group were "improved attitude toward school and learning" (13% of experimentals, 10% of controls) and "like for curriculum, control over curriculum" (11% of experimentals, 13% of controls).

*The full table of likes and dislikes is located in Appendix B.

The returning group shifted from positive to negative comments and ended the year with a significantly lower mean than the experimental group. Since many ratings by the returning students have indicated that they did see the program as useful and valuable, why were positive features of the program not mentioned on this question? An examination of the actual responses of the returning group shows that they responded with suggestions for improving the program, or with comparisons with the previous year; some mentioned dislike for the crowded conditions and lack of study space (23%) and three students (12%) had difficulty getting along with people. It may be that the longer students are in a program the more sensitive they become to its inner workings, and their reactions show up more often than not as negative responses. In this area it appears that as the student body became larger returning students did not like the school as well.

Ratings of the FWS Program by FWS Students. In addition to rating scales which compare perceptions of FWS and control students, some scales were completed only by FWS students. These scales asked for end-of-year perceptions about the FWS program. A subset of the same scales was included in the mail questionnaire sent to graduates of the program. Ten of the scales are presented in Table IV-5. FWS students viewed the school very positively, especially in the areas of learning about careers and opportunities for future planning. Even the lowest items on the scales are seen positively by a majority of the students; the least popular item, opportunities for general learning, had a mean of 3.93, well above the neutral point of the scale.

Graduates were not asked to respond to all of the scales. Means for the items to which they did respond were higher than those for current students, but the ranking of items was similar. It is interesting to note that graduates, looking back at their school program, felt that project activities had been very helpful in learning about careers.

Most FWS students felt that they would choose again to participate in the EBCE program. However, nine students out of the school population of 87 rated this item at the negative level. Perhaps it should be predicted for any adopting district that about 10% of the students will question their choice to enroll in FWL-EBCE.

Attitude Toward Teaching and Learning. An objective of the FWS program is to help students become active learners. Two rating scales are presented in Table IV-6 which probe student opinion on the type of learning available at FWS. The table shows that students now in the program respond positively to the

TABLE IV-5

OPINION OF FWS STUDENTS AND FWS GRADUATES
ABOUT THE EBCE PROGRAM RANKED BY MEAN FOR THE FWS GROUP

Item (5-point scale: 1 = very negative to 5 = very positive)	FWS Total N=87		1973/1974 FWS Graduates* N=26	
	Mean	SD	Mean	SD
In comparison with regular schools, how much opportunity did the EBCE Program provide you for learning about careers?	4.66	.66	4.96	.19
Do you feel that EBCE is a needed program in your school district?	4.52	.77	4.62	.53
In comparison with regular school, how much opportunity did the EBCE Program provide you to get information to make plans for the future?	4.47	.72	4.58	.74
In the program how much were you expected to judge your own behavior and performance and to accept responsibility for actions you took?	4.42	.80	-	-
In the EBCE Program have you been encouraged to progress at your own rate?	4.34	.84	-	-
Have your project activities helped you to learn about careers?	4.30	.93	4.62	.56
Did the program help you to learn about matching what you know about yourself with future career possibilities?	4.28	.85	-	-
In the program, how much were you expected to plan your own activities and manage your own time?	4.26	.95	-	-
If you had it to do over again, do you think you would participate in the EBCE program?	4.25	1.15	-	-
In comparison with regular schools, how much opportunity did the EBCE Program provide you for general learning?	3.93	1.00	4.15	.82

* Graduates were not asked opinion on full set of items.

learning methods used in the FWS program and that they feel much more motivated to learn in this program than in others they have attended. Graduates who have been out of the program for at least one year express even more positive feelings about both the learning methods and the increased motivation to learn at FWS.

TABLE IV-6

ATTITUDES TOWARD LEARNING EXPERIENCES AT FWS

Item (5-point scale: 1 = very negative to 5 = very positive)	FWS Total N=87		1973/1974 FWS Graduates N=26	
	Mean	SD	Mean	SD
How much do you like the way of learning (relating study to experience at resource sites) which is used in the EBCE program?	4.11	.85	4.65	.62
In comparison with your past experiences in regular school, how motivated are you to learn in the FWS program?	4.34	.83	4.50	.75

Although students say that they like the kind of learning available at FWS, how aware are they of the difference in method? Are they becoming active learners? To examine these questions, FWS and control students were asked at the beginning and end of the school year, "What is the best way to teach someone something?" Implied in this question is the concept of the best way to learn as seen by the student. The responses to the open-ended question were coded into ten categories ranging from a strongly teacher-directed position (teacher explains carefully, shows how to do it) to a student-directed position (student does it by himself, finds out what he needs to know.) The original ten categories have been reduced to three for presentation in Table IV-7.*

*The full ten-category Table is presented in Appendix B.

Responses of students in the control group showed little change over the year. However, both experimental and returning students showed a reduction of responses in the teacher-oriented category and an increase in responses in the student-oriented category. Chi-square tests show no significant differences between groups on the pretest, while on the posttest the experimental group had shifted significantly toward the student-oriented category. Returning students were higher in the student-oriented category than experimentals. It is evident that FWS students responded positively to the type of student-centered learning that is used in the FWS program. As their exposure to it increased they were more inclined to see the student-centered approach as the best way to teach, and to learn.

TABLE IV-7

OPINIONS OF FWS AND CONTROL STUDENTS ON THE BEST WAY TO TEACH

Teaching Method	FWS Returning Group		FWS Experimental Group		Control Group	
	Pre %	Post %	Pre %	Post %	Pre %	Post %
Teacher directed: teacher cares, informs, motivates, shows, assists	59	30	57	42	65	70
Student directed: student experiences goes at own pace, decides own needs	32	54	21	37	26	17
Not applicable	9	18	23	21	9	12

Chi-square test, based on frequencies for applicable responses of experimental and control groups, post comparison: $p<.01$

Self-Reports of Change

Do students see themselves as having changed as a result of their school experiences? Are the areas of perceived self-change in FWS students related to the objectives of the FWS program? These questions were explored through an open-ended question during end-of-year testing. All FWS students and control students were asked to name three ways that they had changed as a result of their school experiences that year. Responses were coded into six categories through a coding scheme used in analyzing the previous year's data. Results are shown in Table IV-8. The experimental students gave more responses per student, and had a higher percent of responses in the areas of change in self-growth and in interpersonal growth. The control students had a higher percentage of responses in the area of learning/academic change and more reported no change or a negative change as a result of their school experiences. Results with this year's student groups parallel those for last year.*

A tabulation was made of the number of different change areas (self-growth, career/work, learning/academic, interpersonal, future planning) covered in the response of each student. Results, presented in Table IV-9, show that there was a significant difference in the pattern of changes for the FWS and the control groups. Experimental students were more likely to mention changes over three areas, to see themselves as changing in broadly differing ways, while the control group was more likely to report no change. The mean number of change areas mentioned by the experimental group was 2.8 while for the control group it was 2.4.

In summary, student self-reports of change were significantly related to the type of program in which they were enrolled. Although the FWS students were in a career exploration program, most did not see increased knowledge of careers and work or increased planning for the future as the major areas of self-change. FWS students most frequently saw themselves as having progressed in the areas of self-growth and interpersonal skills (taking responsibility, getting along better with people), while students in a conventional school program, the control group, were likely to either see no change at all or to see change in the conventional academic area (learned a lot in school, studied more math).

*Final Evaluation Report FY 1974, Experience-Based Career Education Program, FWL, 1974, page 90.

TABLE IV-8

SELF REPORT OF SCHOOL-RELATED CHANGES BY FWS AND CONTROL STUDENTS

Area of Change	FWS Returning Group N=15 %	FWS Experi-mental Group N=56 %	Control Group N=64 %
Self Growth	42	37	23
Career/Work	8	6	4
Learning/Academic	23	22	34
Interpersonal	15	24	15
Future Planning	8	3	3
Negative/No change	4	7	20
Mean Student Responses	2.2	2.5	2.2

Chi-square test based on total frequencies for experimental and control groups: $p<.01$

TABLE IV-9

NUMBER OF DIFFERENT AREAS OF SCHOOL-RELATED CHANGE

Number of Major Areas of Change Used in Response	FWS Returning Group N=15 %	FWS Experi-mental Group N=56 %	Control Group N=64 %
3 areas of change	13	20	9
2 areas of change	27	32	34
1 area of change	33	20	19
No change	7	7	22
Blank	20	21	16
Mean areas of change for those responding	2.58	2.82	2.37
SD	.86	.91	.99

t-test for experimental-control group comparison: $p<.05$

Long- and Short-Term Plans

What are the future plans of FWS students and control group students? Are planned activities put into action by program graduates? Information on these questions was collected from FWS and control group students at the beginning and end of the school year and from program graduates by means of an end-of-year mail questionnaire.

Table IV-10 presents data on student plans for one year after high school. Students were presented with a check list of activities and asked to check all applicable categories; some categories have been combined for presentation in Table IV-10. The table presents the data in the form of frequency and percent of students responding to each alternative--because students may have checked more than one alternative, percentages total to more than 100.

The major difference among groups shown in Table IV-10 is found in the increased number of alternatives checked by the experimental group at the end of the year. While the number of responses remained relatively constant for the other groups the mean post response for the experimental group rose from 1.5 to 2.3. It appears that after one year in the program FWS students differ from control students mainly in the number of alternatives chosen rather than the type of activities planned for one year after high school. This suggests that experimental students were more inclined to foresee more than one plan or had a more open view of their future.

How do first-year FWS students' plans for one year after high school compare with what FWS graduates are actually doing one year after high school? Through data collected from the graduate questionnaire it is possible to compare the developing plans of younger students with the "real world" activities of graduates. Table IV-11 compares experimental group responses to those of a group of eighteen students who had graduated from FWS one year previously. FWS students, whose plans are less formulated, checked more alternatives on this question than did the FWS graduates, who were asked to check activities in which they were currently engaged.

Table IV-11 shows similar percents of each group attending or planning to attend a four-year college and working or planning to work full time. However, only 28 percent of graduates report that they are working part time while 60 percent of FWS students have such plans. Only 22 percent of graduates are receiving any type of vocational or technical training (on-the-job training, business college, technical or vocational courses at a junior college); half of the FWS

TABLE IV-10

PLANS FOR ONE YEAR AFTER HIGH SCHOOL

Plans	FWS Returning Group N=15 %		FWS Experimental Group N=56 %		Control Group N=64 %	
	pre	post	pre	post	pre	post
Fulltime employment	13	13	23	30	23	22
Part-time employment	33	53	30	59	14	34
Vocational-technical training	33	33	43	48	41	47
Junior College academic courses	33	40	16	43	13	19
Four-year College academic courses	40	33	29	39	44	45
Other	7	13	5	5	11	11
Number of respondents	14	15	55	55	64	63
Mean responses per student*	1.7	1.9	1.5	2.3	1.5	1.8

*Students were asked to check all applicable responses.

students have plans for such training. The current economic picture is certainly affecting students' plans for working and may have more effect on those students who are not eager to enter the full-time job market. It appears that about the same percent of students who plan to enter a four-year college or work full time, actually do so. The students who wish to work part time and go to school, or who want technical training, may have more difficulty in reaching their goals.*

All student groups were asked to write on what they would "like" to be doing in five years. The question was coded using the categories developed for the

*Out of 26 graduates who responded to the questionnaire, 73% report that they are attending some type of post high school educational program.

TABLE IV-11

COMPARISONS OF ONE-YEAR PLANS OF FWS EXPERIMENTAL STUDENTS WITH ACTIVITIES OF FWS STUDENTS ONE YEAR AFTER GRADUATION

Activities	1974 Graduates N=18		FWS Experimental Group N=56	
	f	%	f	%
Fulltime employment	6	33	17	30
Part-time employment	5	28	33	59
Vocational/Technical training	4	22	27	48
Junior College Academic Courses	5	28	24	43
Four-Year College Academic Course	6	33	22	39
Other	0	0	3	5
Number of respondents	18		55	
Mean responses per student*	1.4		2.3	

*Students were asked to check all applicable responses.

previous year's question which was worded, "What do you expect to be doing in five years?" The new wording led to more wish-fulfilling in the responses, one effect of which was a higher percentage of non-applicable responses. Table IV-12 presents data from the posttest administration of the question to FWS and control groups and from the graduate questionnaire. Graduates, although they are older, are most likely to see themselves as still in school in five years. Control students are more likely than FWS students to see themselves as already working in a professional job in five years. Not all students plan to have a job in five years; there was a range between groups of 52 to 61 in the percentage of students who would like to be working in some capacity in five years.

In summary, little difference could be demonstrated in one-year plans among

TABLE IV-12

END-OF-YEAR OPINIONS ON FIVE-YEAR PLANS

Expected Activity After Five Years	1973/1974 Graduates N=26 %	FWS Returning Group N=15 %	FWS Experimental Group N=56 %	Control Group N=64 %
Work (unspecified job)	23	33	23	22
Work (specific non-professional job)	23	20	16	14
Work (professional job)	12	7	13	23
In college or working for higher degree	27	20	9	14
Uncertain, don't know	8	0	11	8
Not applicable	4	20	20	11
Blank	4	0	9	9

groups with the exception of an increased number of options observed at year end in the experimental group. No major difference was demonstrated between developing plans reported by FWS experimental students and actual activities of FWS graduates one year after graduation; about a third of each group checked "working full time" and another third "going to a four year academic college." About twice as many FWS students hope to work part time, attend junior college or get vocational training as graduates actually engaging in those activities. About 58% of the graduates plan to be working at least part time in five years, while 27% plan still to be in college. Few FWS experimental students plan to be in school in five years. It appears that older students and those with more experience in the FWS program (returning students) are more realistic about the amount of time required to complete an academic program.

Dimensions of Career Planning

What did students write about when asked to describe their future plans? A direct way of finding out about students' career planning is to ask them to describe their plans in a paragraph or two. The feasibility of this technique was first explored through an open-ended question on the 1974-75 application form*: "What are your plans for work or study after high school?" The question was repeated at the end of the school year. At that time more than half a page was allowed for responding along with an additional request to "answer in as much detail as possible." Graduates were also asked the question: "What are your future plans for work or study?" It should be noted that graduates were asked about plans which they may be currently in the process of implementing while other groups were asked about plans for "after high school."

The present discussion will be limited to an overview of findings from post administration of the work/study question to four groups. It will discuss three dimensions of career planning: what content areas were used, the number of stages in the plan, and the presence or absence of alternate plans.

What was the content of student responses? The question was worded to elicit information on plans for "work" or "study," but students often shaped their answer around a statement of what they wanted to "do" or "be" such as "I want to be a lawyer," "work with children" or "fireman"; such statements

*Data on the application form study is included in Technical Memorandum 6, Characteristics of Applicants and Entrants to Far West School, Fall 1974, Experience-Based Career Education Program, FWL, January 1975.

were labeled as "career area" statements. Student responses often encompassed more than one of the above areas. There were seven possible categories into which each pertinent response could be placed: work, career area, study, work and career area, work and study, career area and study, and a combination of all three. In addition the number of responses mentioning "no plan" were noted.

Table IV-13 summarizes the content found in responses to the work-study question by four student groups at the end of the school year. The number of different areas included in the response is indicated in the table. No major differences between experimental and control group members are evident in Table IV-13. These two groups were most likely to have plans for studying, or for working and studying but they were unlikely to mention any specific career area. Returning students were more likely than experimental students to have responses covering two or three content areas. The most complex responses were those of graduates; almost half of this group had plans covering three content areas, most had some career plans and 100 percent of this group mentioned some sort of plans for study. All of the graduates and all of the returning students answered the question by presenting some plan--none reported "no plan." A chi-square test for differences between graduates and experimental students was highly significant. These differences are depicted graphically in Figure IV-3.

How complex were student plans? Could they plan more than one step ahead? Each plan was examined for the number of stages represented in the response. Stages could be strictly sequential or could consist of branches and alternative planning. A sequential plan would be represented by a statement such as "Go to work to earn money and then go to college to prepare for a career as an accountant." Alternative plans were represented by a statement such as "Go to college to study accounting or take secretarial courses at a business college." Responses were coded on a four point scale from one stage to four or more stages.

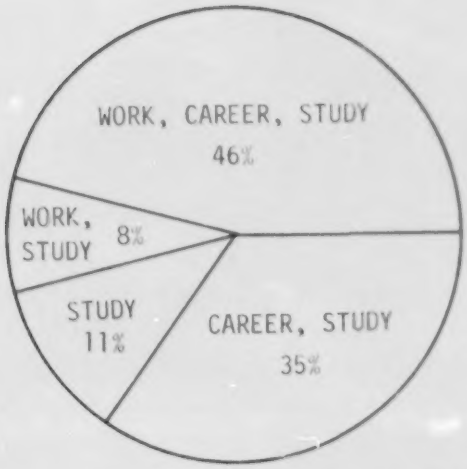
Table IV-14 shows the number of stages in the career plans reported by four groups of students during end-of-year testing. Plans of graduates were significantly more complex than those of current students, while those of returning students were more advanced than first year experimental students. No difference was demonstrated between experimental and control groups. While the experimental student may plan one or two steps ahead, most FWS graduates will be involved in and starting on a plan which has at least three stages.

TABLE IV-13

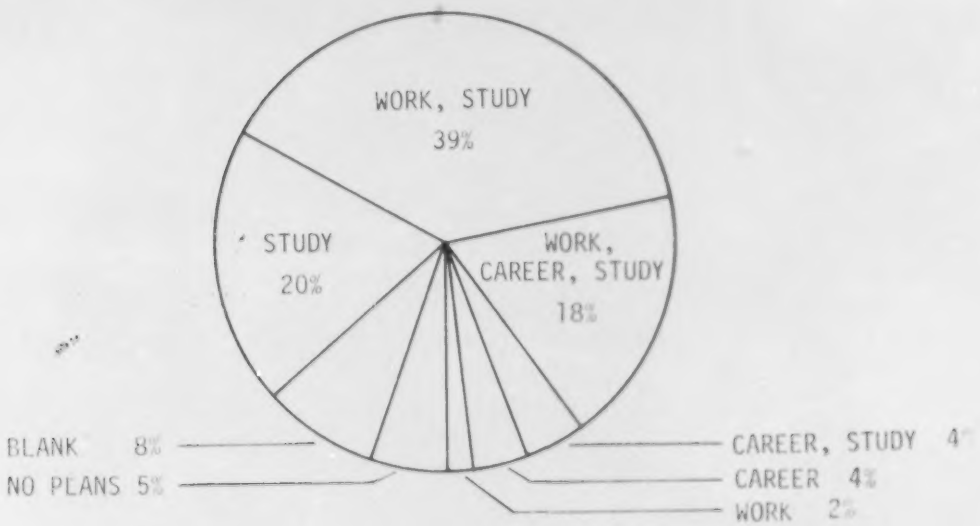
CONTENT AREA OF RESPONSES TO THE WORK-STUDY QUESTIONS--POST DATA

Number of Areas in Response	Content Areas	1973/1974 Graduates N=26		FWS Returning Group N=15		FWS Experimental Group N=56		Control Group N=64	
		f	%	f	%	f	%	f	%
One	Work	0	0.0	1	6.7	1	1.8	2	3.1
	Career areas	0	0.0	0	0.0	2	3.6	2	3.1
	Study	3	11.5	2	13.3	11	19.6	14	21.9
Two	Work and career area	0	0.0	1	6.7	0	0.0	1	1.6
	Work and study	2	7.7	7	46.7	22	39.3	18	28.1
	Career area and study	9	34.6	1	6.7	2	3.6	7	10.9
Three	Work career study	12	46.2	3	20.0	10	17.9	11	17.2
None	No plans	0	0.0	0	0.0	3	5.4	1	1.6
	Blank	0	0.0	0	0.0	5	8.9	8	12.5

Chi-square test for graduate-experimental group comparison: $p<.01$



FWS 1973/1974 GRADUATES - CURRENT PLANNING



FWS EXPERIMENTAL STUDENTS - POST HIGH SCHOOL PLANS

KEY	Work - Plan to work at a non-career job. Career - Plan to prepare for and enter one or more specific career fields. Study - Plan for post high school education or training.

FIGURE IV-3

FUTURE PLANS FOR WORK, CAREER ENTRY, AND STUDY

TABLE IV-14

NUMBER OF STAGES IN CAREER PLANS OF FWS AND CONTROL GROUPS REPORTED DURING END-OF-YEAR TESTING

Stages	1973/1974 Graduates N=26		FWS Returning Group N=15		FWS Experimental Group N=56		Control Group N=64	
	f	%	f	%	f	%	f	%
One stage	0	0	2	13	11	23	13	24
Two stage	5	19	5	33	21	44	21	38
Three stage	8	31	4	27	9	19	16	29
Four stage	13	50	4	27	7	15	5	9
Number of respondents	26	-	15	-	48	-	55	-
Mean responses per student	3.3	-	2.7	-	2.3	-	2.3	-

t-test for graduates-experimental group comparison: $p<.01$

TABLE IV-15

NUMBER OF SINGLE AND ALTERNATIVE PLANS
OF STUDENTS AT END OF YEAR

Item	1973/1974 Graduates N=26		FWS Returning Group N=15		FWS Experimental Group N=56		Control Group N=64	
	f	%	f	%	f	%	f	%
Single plans	12	46	14	93	40	71	39	61
Alternative plans	14	54	1	7	8	14	16	25
No plan	0	0	0	0	3	5	1	2
Blank	0	0	0	0	5	9	8	13

FWS has stressed the importance of options and alternative planning. Do plans of graduates move away from options and toward one closed, comprehensive plan? Table IV-15 shows that the graduates were in fact about equally split between one plan and alternative plans and were more likely to mention alternate plans than other groups. This does not appear related to the complexity of the plan: some students may have worked out a rich network of possible school programs, educational travel, and career explorations, while other students have already well-thought-out paths toward one career. It may be that as plans become more complex more alternatives are seen; this could explain why returning students were the most concerned with developing a single plan.

In summary, it is possible to examine certain dimensions of career planning through analysis of students' written descriptions of career plans. A comparison of four groups, at one time interval, showed very little difference between experimental and control students while returning students had more highly developed plans and students who had graduated from FWS had more complex plans as measured on three dimensions.

Summary

The impact of the FWS program as reported through student plans and perceptions can be observed in six areas: future planning, career exploration, school attitudes, interpersonal growth, self-growth and general learning.

Future Planning. FWS students (mean of 4.5 out of a possible 5.0) and graduates (mean of 4.6) felt strongly that the FWS program provided much more opportunity for making plans for the future than did regular schools. Experimental students rated their program significantly higher than control students on its helpfulness in deciding on post high school plans. In addition, 88% of FWS students felt that their program was good for planning a career compared to 52% of control students. However, few FWS students (3% of experimental, 8% of returning) saw increased planning for the future as an important area of self-change.

One-year post high school plans, as determined by a checklist, did not show major differences between experimental students and returning or control students, except for an increased frequency of responses per student in the experimental group; this may indicate an increased awareness of available options for the experimental group. The actual activities of graduates, one year after leaving FWS, matched the post high school plans of experimental students for full time employment (about one-third of each group) and attendance at a four-year college (also about a third of each group). However, about twice as many FWS students had plans to work part time, get vocational training, or attend junior college as graduates actually engaged in these activities.

Future plans of graduates of the program are more comprehensive in content than plans of younger students. When asked to write on their plans, almost half of the graduates mentioned a combination of working, study, and pursuit of one or more career areas. Only 18% of FWS experimental students mentioned all of these areas; they most frequently had plans to work and go to school (39%) but had not yet related these activities to a specific career or careers. Graduates' plans were also more complex in terms of the number of stages covered. While the experimental students might plan one or two steps ahead, most FWS graduates had plans with at least three stages.

Career Exploration. Far West School students definitely agreed (mean of 4.7 out of a possible 5.0) with the statement that the FWS program provided much more opportunity for learning about careers than did other schools; graduates of the

program were equally positive. FWS students also felt strongly that the program was very helpful in teaching the students how to match what they know about themselves with possible careers and that their project activities had helped them to learn about careers. However, when asked about ways that they had changed as a result of their school experiences, only six percent of the experimental students mentioned increased knowledge of careers as an important area of change.

Career choice appeared to be developing slowly in these student groups. When asked to write on their future plans only 26% of the experimental group mentioned one or more careers while 33% of second-year students and 81% of 1973/1974 graduates named one or more careers which they might pursue.

Attitude Toward School and Learning. FWS students and graduates rated highly two items indicating that they liked the learning method used at FWS and that they felt more motivated to learn than in other programs. Significantly more experimental than control students, at the end of the school year, felt that the student-directed approach was the best way to teach, and by implication, to learn.

On a total of twelve ratings of usefulness of the school program FWS experimental students had higher mean ratings than control students in eight areas. FWS students gave significantly more positive responses than did controls on an open-ended question on likes and dislikes for their current program. Twenty-seven percent of the control group felt that their program was not much good for either career planning or academic work compared to 2% for experimental students.

FWS students see their program as more useful and valuable than do control students but the positive opinions of FWS students emphasize areas other than academic learning, which is preferred by control students. More control students (34% of responses) than experimental students (22% of responses) felt that they had changed positively in the area of academic learning and school attitudes. However, 20% of the control students either reported no school-related changes or a negative change compared to 7% of experimental students.

FWS students felt strongly (mean of 4.5 out of a possible 5.0) that EBCE is a needed program in the school district. However, although most students felt that they would attend if they had it to do over again a small group of nine FWS students answered the item negatively and felt that they would not choose to participate again.

Interpersonal Growth. Experimental students rated the FWS program significantly higher than did the control group on meeting/dealing with people; out of seven program areas they rated this the highest. Graduates also felt the program had helped them to get along better with others. When asked for areas of school-related change, 24% of experimental responses mention interpersonal growth compared with 15% of control students.

Self-Growth. Experimental students rated the program significantly higher than did control students in helpfulness in self-expression; graduates rated it significantly higher than experimentals. FWS students agreed strongly that the program expected them to judge their own behavior and to accept responsibility. They also felt strongly that they were allowed to progress in the program at their own rate. More responses of FWS students (45% of returning and 37% of experimentals) mention school-related change in the self-growth area than did controls (23%).

General Learning. FWS students tended to rate opportunities for general learning lower than other areas. In a set of rating scales this item was the lowest although the mean was still above the midpoint of the scale. The control group saw preparation for college as the way that their school program was the most helpful while the experimental students rated this item the lowest among five related ratings. Control students rated their programs highest in health and fitness and mathematics, while experimental students stressed meeting and dealing with people and self-expression. However, returning students were favorably impressed with the help they had received in writing. No difference was seen in ratings of program helpfulness in reading for the four groups. It appears that FWS students' lower ratings for general learning are largely relative: they tend to rate other areas higher but do not see the program as deficient in general learning, with the possible exception of mathematics.

DIFFERENTIAL USE OF PROGRAM FEATURES

Curriculum Content

Student Projects. The project is the mechanism for individualizing student programs. Except for workshops and tutorials at FWS or courses being taken at public high schools or community colleges, each student's learning program is planned, focused, and carried out in terms of projects. This is to ensure that each student is engaged in purposeful, planned, and documented learning activities--individualized according to his own interests, needs, and abilities--while at the same time aiming at broader curriculum goals and objectives. Students design and complete projects to pursue subject areas, social issues, and/or career areas. Project objectives, when achieved, serve as indicators that learning goals have been met.

Growth in basic skills (reading, communication, and computation skills) and other core curriculum areas (interpersonal, problem-solving, and inquiry skills) is the cumulative result of a student's entire program, not necessarily of a given project. Activities are built into student projects that necessarily require the student to apply basic skills in gathering information, performing on-site tasks, reporting findings, and completing written or other products.

In developing project plans, students are encouraged to pursue their personal interests and educational needs consistent with program goals, and with their learning needs in the core curriculum areas. The scope and duration of projects is kept flexible to accommodate individual interests and learning styles; some students cope better with small pieces and short-term plans and deadlines than other students who more readily commit to extensive involvements of time and effort. The curriculum design and instructional system for FWL-EBCE are fully discussed in the FWL-EBCE implementation document Student Guidance.

Supplementary Learning Activities. Students lacking the communication and interpersonal skills to enable them to interact effectively with adults in unfamiliar settings, or students desiring specialized help not available through community/employer resources, can enroll in supplementary learning activities at the school's resource center. Such supplementary activities include working with the Skills Specialist and tutors in basic skills or in subjects required for college entrance (e.g., chemistry, trigonometry), taking courses in high schools

and community colleges, participating in FWS small-group workshops, and using instructional materials (independently or with tutorial assistance). These supplementary resources and the ways they are integrated into the EBCE instructional system are described in the FWL-EBCE implementation document, Supplementary Curriculum.

Student Programs. The programs of FWS students vary in the balance between use of external resources and reliance on the more traditional (supplementary) curriculum activities. In the FWL-EBCE design, those students who are inadequately grounded in communication and interpersonal skills engage mostly in small-group tutorials and workshops held in the FWS center. They are urged over time to increase their use of external resources. When they do visit a resource person/organization, it is usually for a short orientation to the job or business. Students with highly developed communication and interpersonal skills plan and implement projects using several external resources concurrently and incorporating outside reading or specialized course work. It is expected that the large majority of the students will fall between these two extremes.

Analysis of Differential Program Use

Instrumentation. Three data collection techniques were used to gather information on students' use of program elements: periodic self-reports, end-of-year learning coordinator ratings, and a search of FWS records of credits awarded and learning-activities participation.

Student Self-Reports. The major source of quantitative data on student participation and program activities was the Student Activity Report (SAR). The SAR is a weekly report on which the students enter appropriate hours of each activity. The first section of the SAR covers the use of external resources. Students list each resource contacted and show the number of hours spent at the resource. The second section accounts for time spent in individual activities related to projects, such as reading, information collection, research, and report writing. The third section covers activities within the FWS such as group and individual meetings, workshops, external classes, and tutorials. The form, which the students completed on Fridays, takes only a few minutes to fill out; most information is available from a weekly schedule on which the student has previously planned his activities. The student's Learning Coordinator signs the report and it is then placed in the student's file.

Learning Coordinator Ratings. At the end of the year, each LC was asked to rate students separately on two dimensions: their use of external resources, (i.e., Resource Persons, Resource Organizations, Community Resources) and their use of internal program resources (i.e., workshops, tutorials, staff assistance, programmed-learning materials). The LC was given a list including his own students plus an equal number of other students (randomly selected). He was asked to place the names in equi-size groups representing relatively higher and lower use of external resources (no ratings on an absolute scale were collected). The results were recorded, the students' names were shuffled (but not changed), and the forced choice process repeated for use of internal resources. The results were recorded, names shuffled, and the process repeated based upon use of internal resources. By this process, each student was rated twice on each dimension: once by his own LC and once by another LC.

In the ratings of external resources usage there was agreement on 62 of the 98 students (31 higher, 31 lower); in the ratings of internal resources usage there was agreement on 64 of the 98 students (32 higher, 32 lower).

Of the 31 students the LCs perceived as "higher" users of resources, 22 of these reported resource time above the group median and nine reported below the median. Of 31 students the LCs perceived as "lower" users of resources, relatively complete SAR data were available on only 23; of these, five reported resource time above the median and 18 reported resource time below the median. In the 36 cases where LCs disagreed, SAR data were available on 33; of these 16 reported activity above the median and 17 reported activity below the median.

FWS Records. FWS recorded the credit earned by each student and listed the project-related and supplementary learning activities of each student.

Information on Students' FWS Activity.

Overall Program Activity. Figure IV-4 is a histogram of the distribution of mean weekly program activity (time in hours) reported by FWS students (via SAR) during the Spring, 1975 semester. The median of the distribution is 25 hours/week; the range is from 8.0 hours/week to 42.0 hours/week. FWL-EBCE has previously established a program standard for a student's activity at 25 hours/week.*

*FWL-EBCE Operating Plan FY 1975.

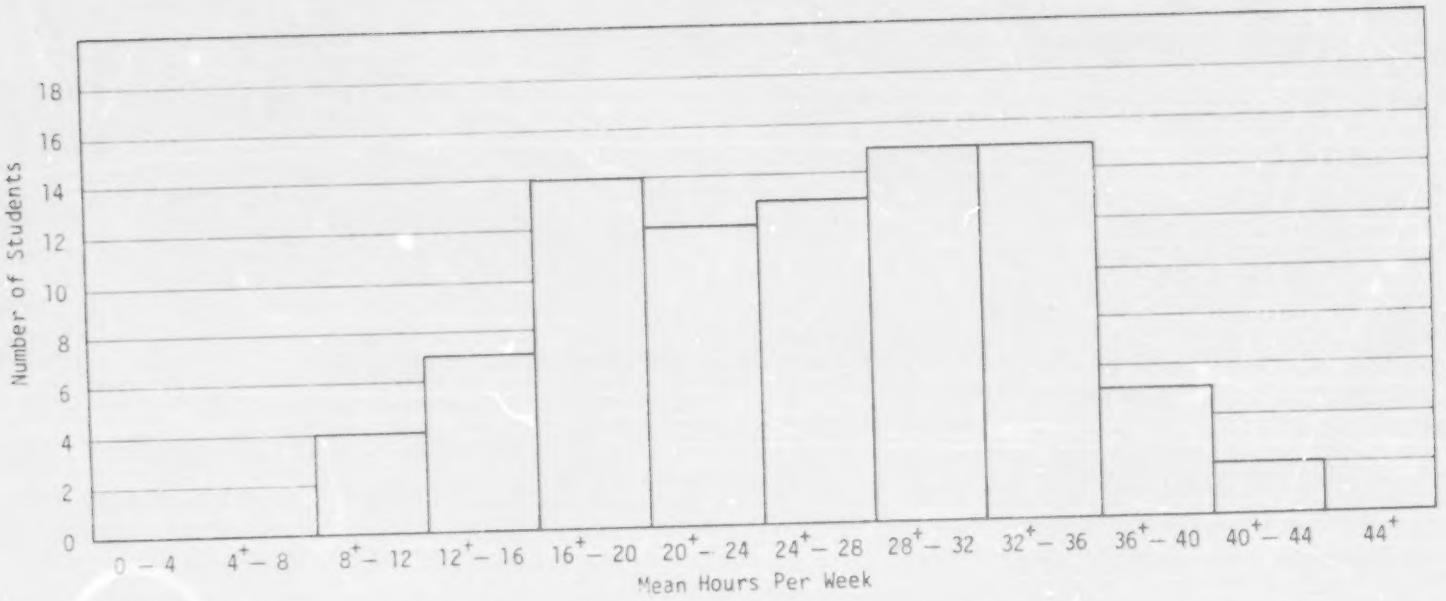


FIGURE IV-4

DISTRIBUTION OF WEEKLY PROGRAM TIME REPORTED BY FWS STUDENTS, SPRING 1975

The summary of data reported by students from one advisory group for the ninth week of the Spring semester is shown in Table IV-16. Columns 1 to 4 show hours reported at resource sites; columns 5 to 8 show numbers of different resources contacted; columns 9 to 19 show time spent in other activities; and column 20 sums the time reported for the week.

External Resource Activities. Figure IV-5 shows the mean weekly activity at resource sites, as reported on the SAR during Spring, 1975. This period includes several weeks shortened by holidays for which no correction has been introduced. The median of this distribution is 5 hours/week; the range is from zero hours/week (2 students) to 18.1 hours/week. FWL-EBCE established the standard for a student's weekly resource-related activity at 7.5 hours/week.* Sixty-three of the 87 students for whom SAR data are available did not attain this standard in reported external resource contact. However, this figure may be misleading, for time reported with resources is limited to direct interaction with a program resource; five hours weekly of a resource's time represents a considerable involvement. Activities at resource sites often lead to related community activities but this followup was reported by students as project preparation--and unfortunately was not identified and summed by our computer program (this oversight will be rectified in future data compilation from the SAR). As an example, five students met for 2-4 hours weekly throughout the year with a corporate public relations executive. As their project, these students planned and implemented an advertising campaign for a nearby short-order restaurant--a project that included market analysis, media study, message design, sales promotion, budget preparation, and campaign follow-up survey. Most of the students' project activities required contacts within the community (e.g., customer interviews, discussions with the restaurant owner, canvassing of the business-area) but these external activities were reported as "project-preparation," not as external resource activities. For these five students, the 2-4 hours reported weekly on the SAR with their resource person represented a minor fraction of their real community involvement.

Each week, approximately two-thirds of the FWS students reported visiting at least one external resource; by the end of the Spring semester, only two students had not made some resource contact. However, this contact was minimal for many students; Figure IV-5 shows that the SAR of 22 students averaged two or fewer hours per week at resource sites.

*FWL-EBCE Operating Plan FY 1975.

TABLE IV-16

SUMMARY OF STUDENT-REPORTED ACTIVITY FOR A MID-SEMESTER WEEK
BY STUDENTS AT FWS

Statistic	Hours with External Resources				Number of Different Resources Visited				Hours in Other Activities										Total Hours of Activity
	RF	RO	CR	Total	RF	RO	CR	Total	Package Meeting	Product Preparation	Workshop	Tutorial	Study for Tutor.	External Course	Consult with LC	LC Group Meeting	Physical Education	Other	Total	
Total (N=90)	223	79	116	418	56	16	32	104	7	356	87	196	166	115	57	208	491	121	1804	2222
Mean	2.48	0.88	1.29	4.64	0.62	0.18	0.36	1.16	0.09	3.96	0.97	2.18	1.84	1.28	0.63	2.31	5.46	1.34	20.04	24.69

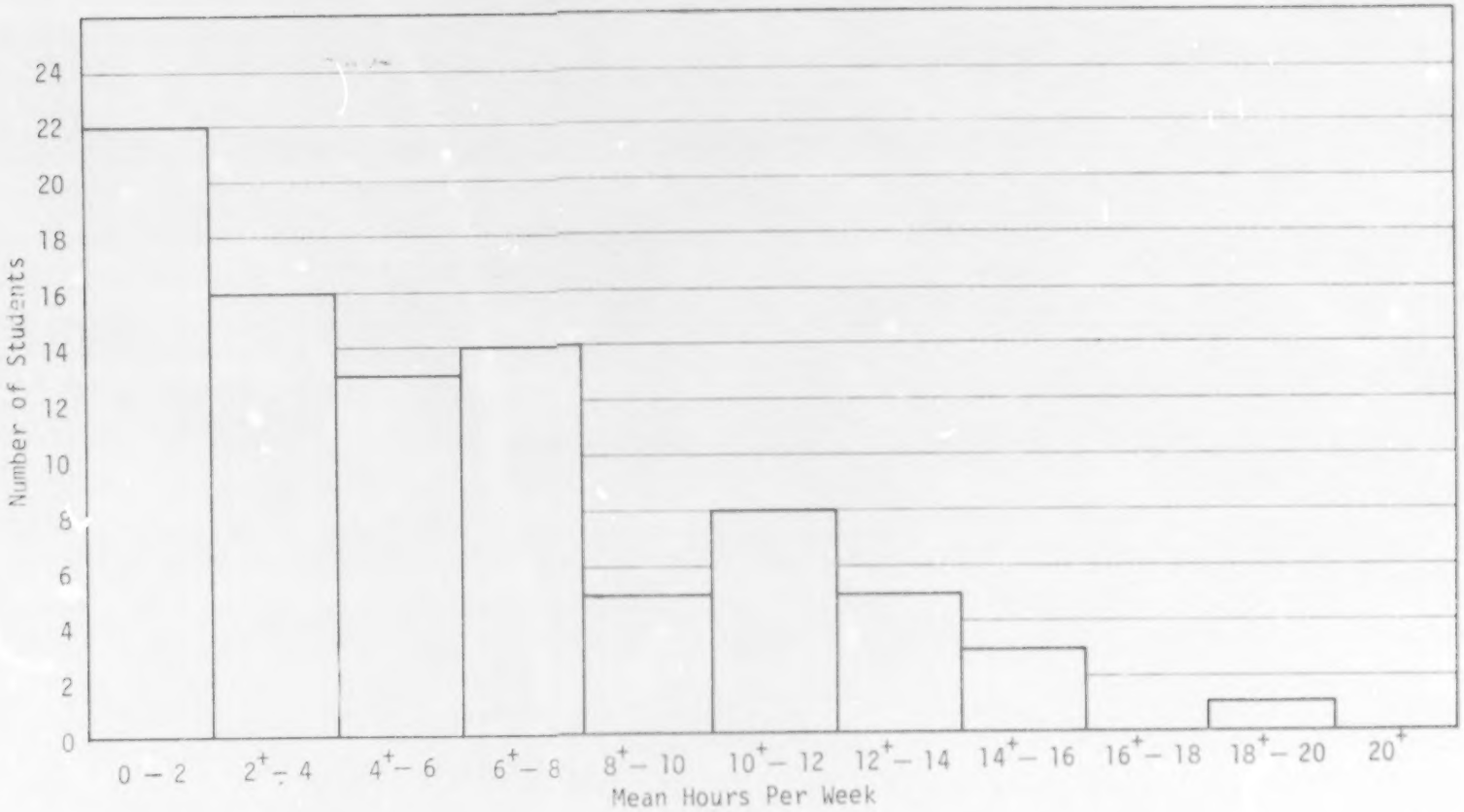


FIGURE IV-5

DISTRIBUTION OF WEEKLY EXTERNAL RESOURCE TIME REPORTED BY FWS STUDENTS, SPRING 1975

Learning Activities. Participation in non-project activities was a variable factor in students' programs. Of particular interest is the range of student participation in small-group and individual sessions with tutors ("tutorials") in basic skills. For purposes of analysis, they have been grouped into "English" and "Mathematics" skills areas. Table IV-17 shows the range of participation in English tutorials for FWS returning and entering students. More entering than returning students participated in English tutorials; almost 80 percent of the entering students took an English tutorial. Five students who were enrolled in an English tutorial received no credit. Overall, about 60 percent of the FWS students received at least one-half credit for an English tutorial.

TABLE IV-17

PARTICIPATION IN ENGLISH TUTORIALS

Degree of Participation		Student Group					
		Returning N=15		Entering N=72		Total N=87	
		f	%	f	%	f	%
Did not take tutorial		9	60	21	20	30	34
Took tutorial:	No credit	0	0	5	7	5	6
	One-half credit	4	27	28	39	32	37
	One or more credits	2	13	18	25	20	23

Table IV-18 shows the range of participation in math tutorials. About two-thirds of the students were enrolled during the year in a math tutorial. Sixteen students enrolled but received no credit. The remainder, about one-half of the student body, received one-half or more credits for math.

TABLE IV-18

PARTICIPATION IN MATHEMATICS TUTORIALS

Degree of Participation		Student Group					
		Returning N=15		Entering N=72		Total N=87	
		f	%	f	%	f	%
Did not take tutorial		6	40	22	31	28	32
Took tutorial:	No credit	2	13	14	19	16	18
	One-half credit	5	33	20	28	25	29
	One or more credits	2	13	16	22	18	21

Credits Resulting From Program Involvement

Credits can be related to three types of program activity: projects, supplementary curriculum, and physical education. As previously discussed, FWL-EBCE emphasis is on learning through projects, and credit distribution is consistent with that emphasis. Table IV-19 presents summarized credit awarded to the 87 students on whom complete year-long data were available.

For the year these students averaged 4.6 credits, of which 2.1 were project-related, 1.5 resulted from supplementary activities, and 1.0 was for physical education. Table IV-20 shows the distribution of credits earned by FWS students. The mean credit earned by students (4.6) was below the 5.0 credits representing normal progress toward graduation. Returning students averaged 5.4 credits; entering experimental students averaged 4.4 credits; other entering students averaged 4.3 credits. The evidence is that many of the randomly selected experimental students (and other entering students) performed below desired program levels.

TABLE IV-19

NATURE OF CREDITS AWARDED BY FWS,
FALL AND SPRING 1974-75

Semester	Project-related Credits	Supplementary Activity Credits	Physical Education Credits	Total
Fall	84.0	56.0	43.5	183.5
Spring	100.5	68.0	43.0	211.5
Total	184.5	124.0	86.5	395.0

An interesting issue that arises is whether or not the FWS student whose learning efforts were structured as intended (directed toward interaction with adults at work sites) received greater reward than those whose activities were not so designed. To investigate the issue, two groups of students were identified:

Group "HIGH": Those students rated "higher" by both LC raters, and whose self-reported external resource time was above median (22 students);

Group "LOW": Those students rated "lower" by both LC raters, and whose self-reported external resource time was below median (18 students).

In terms of credit, the question above can be restated: did students in Group "High" receive significantly more project-related credits than those in Group "Low"? Table IV-21 and Table IV-22 present the data relating to the question. A t-test applied to the credit distributions of Table IV-21 shows a difference in means significant at the .001 level. The distribution of Table IV-21 reveals that the group of "high users" of external resources has both high-rewarded and low-rewarded students; the group of "low users" is (excepting one unexplained anomaly) composed of low-rewarded students. Apparently

TABLE IV-20

DISTRIBUTION OF CREDITS EARNED BY STUDENT GROUPS,
1974-75 FWS SCHOOL YEAR

No. of Credits	FWS Returning Group N=15	FWS Experimental Group N=56	FWS Other Group N=16	FWS Total Group N=87
8	1	0	0	1
7.5	1	2	1	4
7	1	2	1	4
6.5	2	6	1	9
6	1	4	0	5
5.5	1	3	1	5
5	1	5	3	9
4.5	4	9	0	13
4	1	6	4	11
3.5	1	2	2	5
3	1	4	0	5
2.5	0	8	1	9
2	0	4	0	4
1.5	0	0	1	1
1	0	1	1	2
0.5	0	0	0	0
0	0	0	0	0
Mean	5.4	4.4	4.3	4.6

TABLE IV-21

PROJECT-RELATED CREDITS AWARDED TO FWS STUDENTS JUDGED "HIGH" OR "LOW" IN USE OF EXTERNAL RESOURCES

Project-related Credits	Group	
	High	Low
5.5	0	1
5.0	0	0
4.5	1	0
4.0	2	0
3.5	10	0
3.0	1	0
2.5	0	0
2.0	4	3
1.5	2	3
1.0	2	5
0.5	0	6

TABLE IV-22

STATISTICS FOR PROJECT-RELATED CREDIT AWARDED TO STUDENTS JUDGED "HIGH" OR "LOW" IN USE OF EXTERNAL RESOURCES

Group	Number	Range	Total	Mean
High	22	1.0 - 4.5	63.5	2.80
Low	18	0.5 - 5.5	24.0	1.33

two types of students make extensive use of resources: (1) the students who incorporate lengthy, in-depth experiences (explorations) at a few sites into projects, and (2) the students who make superficial, possibly unrelated visits (orientations) to many sites without planning and completing related projects. The first type of student receives a breadth of credit for his/her accomplishments; the second type of student receives only limited, career exploration credit.

Table IV-23 gives the correlations among LC ratings of student's program usage, students' self-reports of program usage, and credits awarded to students during 1974-75. Information on the variable scales is contained in Table IV-26. Notice particularly the high correlations among: (1) ratings of external usage, self-reports of external resource usage, and project credits earned; and (2) ratings of internal usage, self-reports of internal resource usage, and supplementary curriculum credits earned.

The amount and distribution of credit awarded to students and the correlation with resource usage shows that the FWS operated according to FWL-EBCE model design: primary reward was to students for projects involving planned, related learning activities at field sites; and secondary reward was for supplemental learning activities.

Students' Ratings of Some FWS Features

Helpfulness of FWS in Various Areas. At the beginning of the school year FWS students had been asked to check on an initial planning worksheet to check any areas in which they would like extra help. Table IV-24 shows the number of students out of the total student body who requested extra help in each school area and their end-of-year rating of the extent to which the program had been helpful. The mean ratings for those requesting help compare favorably with those for the experimental group in Table IV-2. Notice that (from Table IV-2 and Table IV-24) the group requesting help in mathematics (the most frequently requested area) found the FWS program as helpful (mean of 2.5) as the control students found their program (mean of 2.46), while other FWS student groups rated mathematics assistance lower than did controls.

TABLE IV-23

CORRELATIONS AMONG RESOURCE PARTICIPATION MEASURES AND ASSIGNED CREDITS

Measure	LC Rating-External Use	SAR External Activity	LC Rating-Internal Use	SAR Internal Activity	Project Credits	Supplementary Activity Credits
LC Rating - External Use	-	x	x	x	x	x
SAR - External Activity	.34	-	x	x	x	x
LC Rating - Internal Use	.21	.13	-	x	x	x
SAR - Internal Activity	.17	.06	.17	-	x	x
Project Credits	.42	.26	.08	.15	-	x
Supplementary Activity Credits	.29	.16	.40	.31	.13	-
Total Credits	.48	.29	.30	.29	.81	.68

TABLE IV-24

DISTRIBUTION OF HELPFULNESS OF FWS FOR THOSE WHO REQUESTED HELP IN VARIOUS AREAS

Area of Needed Help	Total FWS Student Body (N=87)				
	Asked for Help	Program Judgment			
		Not Helpful	Somewhat Helpful	Very Helpful	Mean
Reading	19	1	10	8	2.4
Writing	25	1	9	15	2.6
Mathematics	44	5	14	25	2.5
Self-expression	21	0	10	11	2.5
Meeting/dealing with people	27	1	8	18	2.6
Study Habits	15	4	9	2	1.9
Health/fitness	8	0	5	3	2.4

Success of FWS Activities. The Program Activity scales consist of a list of 19 FWS activities. The students were asked to rate on a five-point scale each activity as to its success for that student ("not at all successful for you" to "very successful for you"). Table IV-25 presents the 19 items ranked by mean score for the total FWS population. The means were computed on the basis of the five-point scale while the distribution of responses in the table has been reduced to a three-level scale with responses 1 and 2 being placed in the category "negative" and 4 and 5 placed in the category "positive".

Table IV-25 indicates that students see as most successful certain central concepts of the FWL-EBCE model. They rate most highly three areas of learning--about careers, to make decisions, and about oneself--which are outcome objectives within the FWL-EBCE model. They also rate highly two types of planning--project planning and planning for future careers. In addition they saw

TABLE IV-25

SUCCESS OF 19 PROGRAM ACTIVITIES OF THE FWS RANKED BY MEANS

Activity	Rank	FWS Total Group (N=87)				Mean	SD
		Frequencies (reduced 3-level scale)					
		Neg.	Neut.	Pos.	Blank	5-point scale	5-point scale
Learning about possible careers	1	1	7	78	1	4.38	.69
Learning to make decisions	2	4	15	65	3	4.25	.95
Learning about oneself	3	5	18	64	0	4.13	1.00
Project planning	4	2	20	65	0	4.12	.92
Visiting resource persons	5	7	12	66	2	4.11	1.04
Planning for a future career	6.5	4	21	60	2	4.08	1.00
Individual meetings with LCs	6.5	6	15	64	2	4.08	.96
Visiting community resources	8	8	17	61	1	3.99	1.07
Using forms for planning	9	4	23	59	1	3.95	.99
Doing resource explorations	10	6	22	58	1	3.92	1.06
Visiting resource organizations	11.5	9	23	55	0	3.85	1.12
Improving basic skills	11.5	5	24	57	1	3.85	.93
Doing resource orientations	13	9	26	52	0	3.77	1.07
Learning academic skills	14	9	20	54	4	3.76	1.09
Using the resource center	15	12	28	45	2	3.62	1.10
Physical education activities	16	11	28	47	1	3.61	1.16
Social activities	17	19	24	43	1	3.34	1.27
Going to advisory group meetings	18	24	25	37	1	3.24	1.38
Using project planning packages	19	34	23	30	0	2.92	1.29

as highly successful the one-to-one relationships with adults that are characteristic of the FWL-EBCE model--individual meetings with LCs and visiting resource persons. Three items on the scales were rated below the positive level by more than one-half of the students--social activities, going to advisory group meetings, and using project planning packages.

Summary

FWL-EBCE model emphasizes students' learning through their individually designed projects. Tutorials, workshops, and junior college courses can be made available as a supplement to project activities in some instructional areas, particularly for remedial work in basic skills and for advanced work in college preparation (e.g., mathematics, foreign language). An analysis of all credits earned by students disclosed that FWS did follow model design: 60 percent of academic credit (excepting physical education) was earned through projects and 40 percent of credit was earned through supplementary activities. English tutorials were the most common of the supplementary activities for entering students: 80 percent enrolled for at least one semester.

The Student Activity Report (SAR), a weekly self-report of time spent in EBCE-related activities, is the principal source of information about distribution of student activities. The median value of program activity reported by students matched the established standard of 25 hours per week. The median value of activity reported by students at resource sites was 5.0 hours per week which is below the field activity standard of 7.5 hours per week. The standard, however, is intended to encompass all field activities, including those not at a resource site, but occurring as a result of site contact with resource persons; information on this type of activity was not collected during the year.

Credits earned by students were substantially different for the group of entering students and the group of returning students. Entering students averaged 4.4 credits for the year; returning students averaged 5.4 credits for the year. Normal progress toward graduation requires 5.0 credits per year.

DIFFERENTIAL EFFECTS ON STUDENTS

Some students use certain features of an EBCE program more than other students, of course. It is desirable to know if this differential demand is related to demographic and other student characteristics, and also whether or not it is related to differential program outcomes. An understanding of such relationships, if they exist, would be useful in making provisions for EBCE program implementations.

An unusual opportunity was provided by the performance test of the FWL-EBCE model to study how program features interrelate. The program incorporates a number of innovations, including highly individualized student participation. Moreover, if we were to designate as "treatments" the use made by students of the various program features, then we have a basis for analyzing how different kinds of students and program treatments interact in FWL-EBCE. Ideally, we should also like to know which effects of the program are tied to certain student characteristics or to particular treatments, which suggests that we should have in the analysis some outcome variables, such as credits earned, perceived changes as a result of school, etc. Through analyses of variables classified in these three different ways, the objective was to explore the relationships between

a. Student characteristics and treatment pattern

b. Student characteristics and program outcomes

c. Treatment pattern and program outcomes

It was felt that by analyzing student characteristics, treatment patterns, and program outcomes together, it should be possible to explore the question of how different kinds of students make use of available program features and how EBCE outcomes are affected by this differential program use.

In this descriptive and exploratory study of relations among 63 variables, factor analysis was used for depicting the associations among student, treatment, and outcome variables. Conclusions should be regarded as hypotheses to be tested further.

Variables in the Factor Analysis

Factor analysis is a statistical technique that has been helpful where the intent is to find the fewest, basic dimensions that will best account for (or explain) a set of complex interrelationships. In this study, the interrelationships are the 1,953 correlations between all pairs of the 63 variables appearing in Table IV-26 on the next page. Through factor analysis it is possible to reduce the complexity of the task of attempting to interpret that many intercorrelations. By this method, clusters of variables can be identified that consist of variables that are closely associated with each other and not closely associated with variables from other clusters.

In Table IV-26 are listed the 63 variables that were included in the factor analysis. Contained in the table are the identifying terms with means; standard deviations; number of students represented; classification of the variable as Tr (treatment), Ca (student characteristic), or Ef (effect); and the scale, with high value indicated at the right. Most variables in the table are self-explanatory. For variable 4, "low-high" refers to the grouping of entry schools as in neighborhoods of either low or high affluence. For variable 5, a "1" indicates no past paid job experience, a "5" at least one year full time or two years part time.

Variable 6 is an open-end question asked at entry about school likes and dislikes, with a preponderance of likes yielding a high number on a 1-5 scale code.

Variables 7 through 9 are ratings made by students at the beginning of the school year. Variables 10 through 12 are scores on three subtests of the Comprehensive Test of Basic Skills, administered in September.

Variables 13 through 16 are scores from Job-Related Attitudes (JRA). (These four sub-scales had been developed with the help of cluster analysis techniques from 1973-74 student responses.) Variable 13 is attitude critical of business; 14, attitude pro business; 15, belief in maintaining a low profile in work; and 16, attitude indicating low commitment toward work. Number of items in the four scales are eight, six, five, and five, respectively.

Variable 17, Job-Related Terms, is a test of familiarity with terms commonly encountered in business and industry.

Variable 18, Paid Work This Year, refers to work outside of and incidental to the EBCE program. Additional descriptive data on variable 18 can be found in Appendix B-1.

TABLE IV-26

VARIABLES INCLUDED IN THE FACTOR ANALYSIS

Variable	Mean	SD	N	Var. Type	Scale or Value (low to high)
1. Grade level	1.75	.80	87	Ca	10-12
2. Age in months (as of 9/74)	193.59	10.75	87	Ca	low - high
3. Sex	1.56	.50	87	Ca	male - female
4. Entry school group	1.47	.50	70	Ca	low/high SES
5. Past paid work experience	2.60	1.21	84	Ca	none - some
6. School likes and dislikes	4.11	.99	71	Ca	1 - 5
7. Keep on top of school work	3.38	.73	84	Ca	1 - 4
8. School worthwhile (pre)	3.82	1.16	84	Ca	1 - 5
9. School learned a lot (last year)	2.81	1.25	84	Ca	1 - 5
10. CTBS - Reading	594.05	121.67	87	Ca	100-900
11. CTBS - Math Concepts	556.21	102.14	87	Ca	100-900
12. CTBS - Math Applications	566.54	108.92	87	Ca	100-900
13. JRA - Critical of business	27.24	4.00	85	Ca	disagree/agree
14. JRA - Pro business	17.38	3.42	85	Ca	disagree/agree
15. JRA - Low profile in work	14.75	2.52	85	Ca	disagree/agree
16. JRA - Low commitment toward work	14.42	2.19	85	Ca	disagree/agree
17. Job-Related Terms	17.77	19.15	87	Ca	54 items
18. Paid work this year	2.00	1.94	87	Tr	none-much
19. Ask help reading	.24	.43	87	Ca	no/yes
20. Ask help math	.52	.50	87	Ca	no/yes
21. Ask help writing	.30	.46	87	Ca	no/yes
22. Ask help express self	.24	.43	87	Ca	no/yes
23. Ask help meeting/dealing with people	.34	.48	87	Ca	no/yes
24. Changes as result of school (open-ended)	2.77	.88	69	Ef	1 - 4
25. School helped prepare for work	3.00	.64	84	Ef	1 - 5
26. School helped prepare for college	2.73	.67	79	Ef	1 - 5
27. School helped decide after high school	3.02	.90	83	Ef	1 - 5
28. School helped understand self	2.89	.91	84	Ef	1 - 5
29. School helped get along with others	2.80	.89	83	Ef	1 - 5
30. Like school this year (open-ended)	3.55	1.27	66	Ef	1 - 5
31. Do it over again	4.25	1.15	87	Ef	1 - 5
32. Learn about careers	4.66	.66	87	Ef	1 - 5

TABLE IV-26
(continued)

Variable	Mean	SD	N	Var. Type	Scale or Value (low or high)
33. External Use-LC Rating	1.57	.50	87	Tr	low/high
34. Internal Use-Lc Rating	1.63	.49	87	Tr	low/high
35. External hours - SAR	1.49	.50	87	Tr	low/high
36. Internal hours - SAR	1.51	.50	87	Tr	low/high
37. Take English tutorial	1.66	.48	87	Tr	no/yes
38. Take math tutorial	1.68	.47	87	Tr	no/yes
39. Credit for projects	2.13	1.24	87	Ef	0.0 - 8.0
40. Credit for supplementary learning activity	2.42	.99	87	Ef	0.0 - 8.0
41. Business explorations	1.46	.50	87	Tr	none - many
42. Entering/returning	.17	.38	87	Tr	E - R
43. Career planning (post)	3.33	.99	78	Ef	2 - 5
44. Attitudes Toward Tests (negative)	12.32	4.39	81	Ca	28 items
45. Visiting resource organizations	3.85	1.13	87	Tr	1 - 5
46. Improving basic skills	3.85	.94	86	Ef	1 - 5
47. Physical education activities	3.60	1.17	86	Tr	1 - 5
48. Learning about possible careers	4.38	.69	86	Ef	1 - 5
49. Using forms for planning	3.95	.99	86	Tr	1 - 5
50. Visiting resource persons	4.09	1.05	86	Tr	1 - 5
51. Doing resource orientations	3.77	1.08	87	Tr	1 - 5
52. Visiting community resources	3.99	1.08	86	Tr	1 - 5
53. Social activities	3.34	1.28	86	Tr	1 - 5
54. Learning about oneself	4.13	1.01	87	Ef	1 - 5
55. Going to advisory group meetings	3.24	1.39	86	Tr	1 - 5
56. Using learning packages	2.92	1.30	87	Tr	1 - 5
57. Doing resource explorations	3.92	1.07	86	Tr	1 - 5
58. Planning for a future career	4.08	1.00	85	Ef	1 - 5
59. Using the resource center	3.62	1.10	85	Tr	1 - 5
60. Learning to make decisions	4.25	.96	84	Ef	1 - 5
61. Project planning	4.11	.92	87	Tr	1 - 5
62. Learning academic skills	3.76	1.10	83	Ef	1 - 5
63. Individual meetings with LCs	4.08	.97	85	Tr	1 - 5

Variables 33 and 34 are ratings by the FWS staff on the extent to which each student participated in the external (field) and internal (FWS Center) opportunities provided by the program. Variables 35 and 36 are similar measures obtained from Student Activity Reports (SAR) submitted weekly by students.

Variable 41 indicates participation for 10 or more hours with resources that can be classified as a "business-type."

Attitudes Toward Tests, 44, is a 28-item scale scored so that a high score shows negative attitudes toward tests and testing.

Variables 45-63 are results from a rating scale completed by students in response to the instructions: "How well did different parts of the program work? Below is a list of activities in the school program. Please rate each item as to how successful it was in your own experience at the school." Possible ratings are from 1 to 5.

Interpretation of the Factors

When there are many probably interrelated (correlated) measures to study, factor analysis enables the investigator to reduce them to a much smaller set of independent dimensions (factors). Second, it is possible to identify which of the original measures "cluster" in terms of these independent dimensions. It is a potentially useful method where measures of correlation are available for an unwieldy number of variables and where the objective is to describe the matrix of intercorrelations in relation to hypotheses or to suggest new hypotheses for later analysis. The purpose here was to generate new hypotheses in an area where little is known.

In this study, intercorrelations were computed between all possible pairs of the 63 variables. From this 63 X 63 matrix of correlations, 16 factors were derived by factor analysis. A factor represents a cluster of closely related variables. To illustrate, following is the cluster of variables associated with Factor A.

	Factor A	Loading	Type
2	Age	-.76 (B .37)	Ca
1	Grade level	-.73 (B .51)	Ca
38	Take Math tutorial	.70	Tr
34	Internal Use LC rating	.58	Tr
40	Credit for supplementary learning activity	.58 (O .36)	Ef
37	Take English tutorial	.31 (B-.51)(D .32)	Tr

Six measures have substantial "loadings" on Factor A. Every factor loading above .299 is shown on the listing. Where a measure has a loading on another factor or factors, that loading is also shown (e.g., variable 2, Age, has a loading of .37 on Factor B). A loading for Factor A can be thought of as the correlation between that variable and the factor (the cluster of variables). For example, the last item on the list, 37, Take English Tutorial, correlates least with the factor (.31), while item 2, Age, correlates most, i.e., has the highest loading, -.76. But all six variables are considered to have some thing(s) in common in order to cluster on this factor. The number in the left column refers to the number of the variable as it appears in Table IV-26. The right-hand column in the listing shows the classification of the variable as either a student Characteristic (Ca), Treatment (Tr), or Effect or outcome (Ef).

From the particular cluster of six variables on Factor A it is possible to construct certain hypotheses. (Note the negative leadings for variables two and one, -.76 and -.73. Instead of these correlations meaning older and higher-grade-level students, the negative sign reverses the meaning to refer to younger students.) It is apparent that younger students and students from the lower grades participate heavily in the math tutorials and to a lesser extent also in the English tutorials. These younger students who take tutorials in basic skills tend to be rated by LCs as heavy participants in the internal resources of school and are awarded supplementary learning activity credit.

The interaction among Characteristics, Treatments, and Effects (see last column in the listing) are thus evident in Factor A. Students with characteristics numbered 2 and 1 make particular use of the program (treatment), 38, 34 and 37, with effect, number 40. These younger students, through appropriate and extensive use of resources at the school center achieve supplementary learning-activity credits. Thus, a possible title for Factor A could be "Credited Participation with Supplementary Curriculum."

It is not surprising that younger students make more use of tutorials. Two observed reasons are (1) younger students are less likely to have met the Oakland academic and math requirement of 8th grade performance level; if they had not yet met the requirement they were directed into tutorials; and (2) there was a definite tendency to "mother" or "parent" younger students to encourage them into school-center activities rather than push them out into

the community.

Classification to the categories (Ca, Tr, and Ef) was made prior to the factor analysis. Some variables do not fit neatly into a single category and were arbitrarily assigned to one. Characteristics (Ca) are usually from the beginning-of-year data collection, but notable exceptions are the Job-Related Attitude scales, 13-16, obtained at year-end. Correlations between pre and post scores are high enough for those variables to indicate fairly stable attitudes over time and they consequently are considered more Characteristic of students than Effects.

Treatments (Tr) are program features that get differential use by the students. Effects (Ef) tend to be end-of-year measures. A summary of the hypotheses that were generated by the factor analysis, and that bridge these three classes, can be found at the end of Chapter IV.

As a convenience to the reader, each of the factors has been given a title with the understanding that the labels are only a shorthand means of communicating an initial hypothesis about associated variables. The labels were derived from and stand for the particular sets of items that are listed together as a result of their intercorrelations.

For details on the factor analysis procedure used, see Appendix C.

FACTOR B. General Academic Achievement		Loading	Type
11	CTBS--Math concepts	.89	Ca
12	CTBS--Math applications	.86	Ca
10	CTBS--Reading	.84	Ca
17	Job-related terms	.78	Ca
4	Entry school group	.63 (N .37)	Ca
1	Grade level	.51 (A -.73)	Ca
37	Take English tutorial	-.51 (A .31/D .32)	Tr
14	JRA-Pro business	-.50 (E .43)	Ca
49	Using forms for planning	-.40 (C .44)	Tr
2	Age	.37 (A -.76)	Ca
56	Using learning packages	-.37 (J .58)	Tr
53	Social activities	-.33 (P .53)	Tr
24	Changes as result of school (open-ended)	.31 (K .50)	Ef
44	Attitudes toward tests (negative)	.31 (L -.30)	Ca

As suggested by Berliner and Cahen,* "the trait of general intelligence is a problem in the design of Trait-Treatment Interaction studies because of its pervasiveness." By establishing this factor (Factor B) in the matrix, i.e., by removing to this factor much of the variance shared by these variables by reason of a general influence, the confounding effects of general academic achievement variance in other factors is greatly reduced. (Factor C, discussed below, serves that same function in reducing the specific influence of a rating scale.)

Some substantive information can be gleaned from examination of the Factor B variables in the above listing. Those students who score high in the achievement tests, who are older and who do not have a strong pro-company or pro-business attitude, tend to give lower success ratings to use of learning packages and planning forms, and to social activities than they give for the other program features from the School Activities Scale (variables 45-63). Few of these students take English tutorials. It is no surprise that students with higher academic achievement skills do not find the forms useful. Once they have learned the planning process the forms become paperwork to them rather than tools.

* Berliner, David C., and Cahen, Leonard S., Trait-Treatment Interaction and Learning. In Fred N. Kerlinger (Ed.) Review of Research in Education. Itasca, IL: Peacock, 58-94, 1973.

FACTOR C. Program Components Rating		Loading	Type
52	Visiting community resources	.80	Tr
57	Doing resource explorations	.78	Tr
45	Visiting resource organizations	.72	Tr
50	Visiting resource persons	.72	Tr
61	Project planning	.71	Tr
51	Doing resource orientations	.69	Tr
59	Using the resource center	.70 (P .33)	Tr
48	Learning about possible careers	.55 (G .45)	Ef
60	Learning to make decisions	.54 (F .39)	Ef
58	Planning for a future career	.51 (G .45)	Ef
49	Using forms for planning	.44 (B -.40)	Tr
31	Do it over again	.40 (D .50)	Ef
62	Learning academic skills	.39 (M .52)	Ef
56	Using learning packages	.37 (B -.37/J .58)	Tr
63	Individual meetings with LCs	.36 (M .37/J .33)	Tr
46	Improving basic skills	.35 (M .55)	Ef
27	School helped decide after high school	.33 (E .64)	Ef

This factor, along with Factor B, accounted for a large share (18%) of the 16-factor variance. Factor C should be considered largely specific to the School Activity Scale, which lists 19 activities in the school program and asks the student to "rate each item as to how successful it was in your own experience at the school," on a scale of 1-5 with two exceptions, 31 and 27. No treatment variables not in the School Activity Scale appear in the above list.

No attempt will be made to interpret this factor in terms of its meaning. It accounts for much of the intercorrelation due to the common context, the possible response-set bias, and the fact that a relatively large number of items from this single scale are included in the analysis. Not appearing in the list above but appearing in lists for other factors are variables 47, 53, 54, and 55 from that scale. Also, all but the first four variables listed for Factor C have loadings on other factors that can be more easily and meaningfully interpreted than this first one. Table IV-25, presented earlier, shows the relative extent of success of each of the above program activities as perceived by the students.

FACTOR D. Turned on to School		Loading	Type
30	Like school this year (open-ended)	.91	Ef
42	Entering/returning	-.66	Tr
31	Do it over again	.50 (C .40)	Ef
9	Learned a lot in school (last year)	-.35 (E .30)(G .66)	Ca
37	Take English tutorial	.32 (B -.51)(A .31)	Tr
41	Business explorations	.30 (I .51)(O .45)	Tr

Entering (new) students who disagreed with the statement "I learned a lot from school last year," tend to like FWS and would make the choice to attend FWS again. There is also an indication, less strong, that the leading program treatments for such students were in English tutorials and explorations in business-type organizations.

FACTOR E. Utility of School Preparation		Loading	Type
25	School helped prepare for work	.74	Ef
26	School helped prepare for college	.71	Ef
27	School helped decide after high school	.64 (C .33)	Ef
14	JRA-Pro business	.43 (B -.50)	Ca
9	Learned a lot in school (last year)	.30 (D -.35)(G .66)	Ca

The three measures with the highest loadings on Factor E are Effects variables from the same scale, which asks for agreement or disagreement with statements that "describe various ways in which your school program may or may not have assisted you." Those students who have favorable attitudes toward business and learned a lot from school the previous year feel that the school helped prepare them for work, college, and helped them make decisions after high school.

FACTOR F. Females and Social/Career Skills		Loading	Type
22	Ask help express self	.65 (H .31)	Ca
3	Sex	.54	Ca
23	Ask help meeting/dealing with people	.46	Ca
32	Learn about careers	.43 (G .41)	Ef
60	Learning to make decisions	.39	Ef
20	Ask help in math	.32	Ca

Girls in the program seek help in expressing themselves in meeting and dealing with people and, to a lesser extent, in math. They feel a successful program activity for them was learning to make decisions and that FWS provides superior opportunity to learn about careers. Factor F is probably a reflection of societal change. Girls are now expected to develop career goals and not just as secretaries, nurses, and teachers--therefore are interested in exploring. "Expressing self" is probably interpreted by some as poise, makeup, and dress--i.e., modeling and fashion which was pursued both externally and with internal workshops conducted by RPs.

FACTOR G. Shift to Career Preparation		Loading	Type
9	Learned a lot in school (last year)	.66 (D .35)(E .30)	Ca
8	School worthwhile (Pre)	.45	Ca
48	Learning about possible careers	.45 (C .55)	Ef
58	Planning for a future career	.45 (C .51)	Ef
32	Learn about careers	.41 (F .43)	Ef
54	Learning about oneself	.32 (K .54)	Ef

For those students who were quite satisfied with and learned a lot from their previous schools, the most successful outcomes were learning about and planning for future careers. Learning about themselves was also among the more successful effects of the program for them.

Learning about and planning for careers were the most outstanding features of FWL-EBCE for those who had high appreciation for their previous, more traditional education.

FACTOR H. Low Field Commitment		Loading	Type
16	JRA--low commitment toward work	.75	Ca
15	JRA--low profile in work	.70	Ca
13	JRA--critical of business	.53	Ca
36	Internal hours--SAR	.40	Tr
22	Ask help expressing self	.31 (F .65)	Ca

Three kinds of job-related attitudes that together constitute a negative commitment toward work and business are associated with putting in a relatively large number of hours at the school center. The factor appears to have a

slight association with having a felt need for self-expression. It is an interesting hypothesis that students who show by their attitudes that they should keep a low profile in the world of work also show this desire to become more expressive (the actual correlation between variables 15 and 22 is .34), perhaps to gain confidence to move in direction of higher profile.

FACTOR I.	Doublet	Loading	Type
18	Paid work this year	.67	Tr
41	Business explorations	.51 (D .30)(O .45)	Tr

Not much can be made of Factor I, since only two variables have loadings above .299, and the meaningful relationship between these two variables is not readily apparent. One might speculate that the association between the two comes from the probability that students who have paid work experience are more likely to otnerwise participate in external resources provided in the program, and that a number of these explorations turn out to be in some kind of business. This hypothesis is not supported by the correlations, however, which are essentially zero between variable 18 and the two external participation variables, 33 and 35.

FACTOR J.	Use of Structured Planning Provisions	Loading	Type
55	Going to advisory group meetings	.67	Tr
56	Using learning packages	.58 (C .37)(B -.37)	Tr
43	Career Planning (Post)	.34	Ef
63	Individual meetings with LCs	.33 (C .36)(M .37)	Tr

Factor J suggests an interesting relationship between treatments and outcomes in that students who believe that using learning packages has been a successful experience for them, who feel that going to advisory group meetings as well as individual meetings with LCs was good for them, tend to have well developed career plans for after high school. The association of the three treatment variables is with the rated quality of career planning at the end of the year as stated in response to the question, "What are your plans for work or study after high school--answer in as much detail as possible." There appears to be some payoff in using learning packages and going to the meetings for preparing well developed plans for the future. Correlations of 43 with the

other variables listed for J are not high enough, however, to make this any more than a very tentative hypothesis needing verification.

FACTOR K. Self Development		Loading	Type
29	School helped get along with others	.83	Ef
28	School helped understand self	.68	Ef
54	Learning about oneself	.54 (G .32)	Ef
24	Changes as a result of school (open-ended)	.50 (B .31)	Ef

The loadings on Factor K are higher than those on J and consequently more confidence can be placed in the validity of association among listed measures. K is mainly an Effects or outcome factor, with the Effects being end-of-year expressions that the school helped in getting along with others and understanding self, and that school therefore brought about a relatively large number of self-perceived changes.

FACTOR L. Doublet		Loading	Type
7	Keep on top of school work	.87	Ca
44	Attitudes Toward Tests (negative)	-.30 (B .31)	Ca

This is another two-variable factor with little information, except that students who feel it is important to keep on top of school work, tend to have more positive attitudes toward taking tests.

FACTOR M. Use of General Basic Skills Provisions		Loading	Type
5	Past paid work experience	.67	Ca
46	Improving basic skills	.55 (C .35)	Ef
62	Learning academic skills	.52 (C .39)	Ef
63	Individual meetings with LCs	.37 (C .36)(J .33)	Tr
47	Physical education activities	.35	Tr

Having previous work history may heighten appreciation for the general provisions in the program for developing basic and academic skills, as well as for the self-selected physical education activities. An interesting contrast is Factor C, credited participation in basics with younger students.

Reference in Factor C is to use of tutorials. Presumably Factor M represents those who progress in basic skills without recourse to tutorials but rather through other avenues such as projects that blend in field experiences. Perhaps the kind of maturity associated with past work experiences goes with a recognition that improvement in basic skills can be effected in this practical way.

FACTOR N. Language Skill Needs		Loading	Type
21	Ask help in writing	.85	Ca
19	Ask help in reading	.59	Ca
4	Entry school group	.37 (B .63)	Ca
6	School likes and dislikes	.34 (O -.39)(P -.67)	Ca
26	Helped prepare for college	.31 (E .71)	Ef

Four student characteristics were clustered on this factor, the strongest loadings being with the expressed desire for obtaining extra help in writing and reading. Students from the less affluent and higher minority schools frequently express their need for assistance in language skills. They tend to express negative attitudes toward school at the beginning of the year but feel at year-end that school helped prepare them for college.

FACTOR O. High-credit Program Utilization		Loading	Type
33	External use LC rating	.72	Tr
39	Credit for projects	.60	Ef
35	External hours SAR	.54	Tr
41	Business explorations	.45 (D .30)(I .51)	Tr
6	School likes and dislikes	-.39 (N .34)(P -.67)	Ca
40	Credit for supplementary learning activity	.36 (A .58)	Ef

The kinds of students represented by this factor appear to be making maximum, effective usage of the program. They are earning both kinds of credit, for projects and for supplementary learning activity. These credits are clearly associated with participating heavily with the external resources offered in the community. An incidental finding is that students represented by this high-credit program-utilization factor expressed more school dislikes than likes when quizzed at the beginning of the year.

FACTOR P.	Social Activity for the Disaffected	Loading	Type
6	School likes and dislikes	-.67 (N .34)(O -.39)	Ca
53	Social activities	.53 (B -.33)	Tr
59	Using the resource center	.33 (C .70)	Tr

This is a relatively weak factor, having only three loadings higher than .299. It suggests that there are students who emphasize most the negative aspects of school at the beginning of the year, who also feel the social activities and the general use of the learning resources were the most successful features in the program.

Summary

A factor analytic study of student-associated variables was conducted to begin to define what kinds of students make use of what aspects of the EBCE program with what differential effects. A purpose of the factor analysis was to determine whether plausible hypotheses could be constructed which would represent these interrelationships. It is apparent from the discussion in this chapter on Interpretation of Factors that a number of such hypotheses were generated and many of them may well have implications for FWL-EBCE adopters.

Each of the 63 variables had been classified as either student Characteristics, Treatments, or Effects. Of the sixteen factors, some represent all three classes, thus permitting the study of this three-way association. Other factors represent relations between student Characteristics and Treatments, Treatments and Effects, or student Characteristics and Effects. The factors represented by only a single classification do not permit across-class generalizations.

Summarized below are hypotheses derived from the data on eleven of the most meaningful factors. (The factor on which the hypothesis is based is shown in parenthesis.)

Hypotheses Bridging Across Three Categories: Student Characteristics, Treatments, and Effects.

1. Younger students make more use of the school center, especially the features that help them in meeting English and math requirements, and earn credit predominantly through supplementary learning activities. (A)

2. New students to EBCE (of any age) who feel their prior learning has been inadequate and who participate in the program are the most enthusiastic proponents of the worth of the school year. (D)

3. Those with previous paid work experience are among the most satisfied with their progress in basic and academic skills and with their one-to-one association with LCs. (M)

4. There are moderate critics of school who are making maximum, effective use of the program, participating fully in the community learning experiences, and earning both project and supplementary activity credit. (O)

Hypotheses Relating Student Characteristics with Treatments.

5. There are students who have a generally negative feeling toward the world of work, who stay at the school center much of the time and are seldom involved in the external learning experiences in the community. (H)

6. Some students most seriously disaffected by school in the past do not really engage in the EBCE program except at the school center which they see as useful primarily for its social activities. (P)

Hypotheses Relating Student Characteristics with Effects.

7. Holding favorable attitudes toward business and toward previous years of learning is a predisposing condition for success in preparation for work, for college, and generally for making decisions after high school. (E)

8. Female students tend to seek help in developing their interpersonal skills, with emphasis on self-expression, and to feel special satisfaction with their learning about careers and learning how to make decisions. (F)

9. Students clearly satisfied with their education in the prior year realize their major benefits in FWL-EBCE from learning about and planning for possible careers. (G)

10. Students from the less affluent and higher minority schools seek help especially in language skills, writing and reading, and feel

their major benefit from FWL-EBCE is assistance in preparation for college. (N)

Hypothesis Relating Treatment with Effects.

11. The combination of using learning packages and satisfaction with meeting individually and in groups with LCs is beneficial for preparing well developed career plans for after high school. (J)

CHAPTER 5:

Model Implementability

CHAPTER V: MODEL IMPLEMENTABILITY

This chapter treats several topics related to the implementability of the FWL-EBCE model:

- What discrepancies were identified in the FWS implementation of FWL-EBCE?
- What is the plan for the continuation of Far West School by the Oakland Unified School District?
- What evidence is there that the model can be implemented by a school district?
- How feasible is FWL-EBCE model adoption across districts of widely varying socio-economic environments?
- What factors do school districts identify as critical in a decision to adopt or reject FWL-EBCE?
- What is known about FWL-EBCE program costs?

THE FAR WEST SCHOOL PERFORMANCE TEST

The primary intent of FWL during 1974-75 was to subject the FWL-EBCE model to a performance test. Such a program test requires a hands-off role by program developers and evaluators. The FWL-EBCE staff was assigned the role of educational consultant to FWS: orienting new staff prior to operations; clarifying procedural guidelines; monitoring and troubleshooting operations; and documenting operations and outcomes. The need for such services at FWS was intensified because the FWL-EBCE implementation guides were in preliminary form, not fully tested, and as yet not developed to the standard expected for educational implementation--and because of the variance in staff familiarity with the model.

During the school year a member of the development staff attended most FWS staff meetings, attended selected student activities such as advisory-group meetings and package seminars, and periodically reviewed student records. When an emerging problem was identified, it was presented and discussed with the FWS Director or with the FWS staff at a group meeting. No effort was made to force change or acceptance of a proposed solution upon FWS staff; the role of consultant was maintained.

The primary purpose of providing technical assistance to FWS operations staff was to aid FWL-EBCE developers in their efforts to: (1) improve in clarity

and focus the FWL-EBCE model procedural documents as a result of problems in interpretation observed during the performance test; (2) develop usable, generic documents on program procedures and program implementation that would be ready for test at the demonstration site and the adopting sites during FY 1976; and (3) develop staff-training and technical assistance methodologies for use at the demonstration site and adopting sites during FY 1976.

While the model was implemented in its essential aspects at FWS, discrepancies were observed between what the model prescribes and what actually occurred. Changes in handbook descriptions of model procedures were made as a result of the discrepancies noted below. In some cases information is not available on how widespread these discrepant practices were; therefore it should not be assumed that these observations reflect the predominant practices at FWS.

1. Credit Assignment. Credit was awarded to some students without adequate documentation of learning attained. Many projects did not meet all program criteria; those projects within the scope of the "packages" often did not fulfill package goals; many of those outside package areas were designed with inadequate learning goals and with ill-defined indicators of learning attainment.* In some cases credit was awarded in the absence of prescribed documentation on the basis of claims of time spent in program-related activities.

2. Project Planning Packages. Only the Social Science group meetings were held regularly. Packages also exist in the fields of Biology, Commerce, Communications and Media, and Physical Science. The lack of package meetings prevented the students who were pursuing individual projects within the same subject field from obtaining a valuable breadth of exposure. The model prescribes that the LC acting as package coordinator is to serve as a leader for project design within a package area. Insufficient use of the package group meeting resulted in a de-emphasis of this function. Thus, the quality of student projects probably suffered.

3. Advisory Group Meetings. Routine matters such as forms completion and collection of evaluation data sometimes displaced the primary

*See the FWL-EBCE implementation document Student Guidance.

purpose of the meetings, which is to spur inter-student communication through group discussion/participation and to increase students' career development, awareness of social issues, and interpersonal and problem-solving skills. Some group meetings seemed more directed than guided. These observations, together with those made of package meetings, revealed that some of the FWS staff either did not understand or were not able to achieve the objectives of the group sessions as prescribed in the FWL-EBCE documents.

4. Supplementary Curriculum. The tutorial program was overemphasized. Some students used the program throughout the year to obtain credits without ever tasting the real FWS program: experience-based learning. The degree of insistence on project activity varied among the LCs corresponding to their interpretation of model design.

5. Student Guidance. Project planning was not always guided or monitored satisfactorily. According to program procedures, a student's initial Project Plan is a foundation for an evolving, but guided plan for a student's learning. The student is encouraged to modify (or even, on good cause, abandon) his plan for learning as he enters the field and develops better information about the project area. However, the Plan was often viewed as a contract to be accomplished regardless of changes in student interest. Some students lost interest in their projects and either completed them with poor quality, or simply left them unfulfilled. The misunderstanding of the use of the Plan resulted on occasion in a student's writing his Project Plan to conform to his activities and products already completed.
Monitoring of students' learning activities at resource sites was sometimes inadequate. Procedures require frequent personal and telephone contact with program resources; this was not always accomplished. As a result, on occasion students drifted into non-productive activities and lost interest in their project activities before the situation was diagnosed by the LC.

Some model deviations observed were incorporated as modifications to the FWL-EBCE model. For example, FWL-EBCE procedures specified that Learning Coordinators should divide their student groups in half for advisory group meetings so that the smaller group size (usually 12 to 15) would enable active

participation in the discussions by all students. This procedure was followed by only one of the four LCs during the Fall semester. Discussions with the other three LCs revealed these reasons for their desiring larger group meetings: they encountered poor student attendance when only one-half of the group was required to meet at one time; they felt student participation in discussions was easier to achieve when they had a larger group to draw on; it required less time (fewer meetings) to meet with the whole group at once. In this case, the requirement for small-group advisory meetings was changed to a recommendation to allow each individual LC to choose the method most consistent with his particular group leadership style.

In other cases, unintentional deviations from specified procedures were detected, brought to FWS staff attention, and were corrected. As an example, procedural discrepancies in the FWS supplementary curriculum (e.g., small-group tutorials and workshops) between design and practice were noticed in the fall. In particular:

1. Several students indicated they felt they had been placed in basic skills tutorials, contrary to procedures that specify that students have the final decision.

2. Some students felt that they had no influence in the setting of learning objectives in the tutorial, contrary to procedures that state that tutors and students must agree on objectives.

3. Some tutors were unaware of the model procedures requiring periodic reporting of students' progress.

The cause and extent of the deviations were documented through interviews of students and tutorial staff. (See FWL-EBCE reports: Description of the Tutoring Program at Far West School, with Emphasis on Basic Skills; and Student Perceptions of Basic Skills Tutorials at FWS, Fall 1974.) The problem was brought to the attention of the FWS staff.

Observations and analysis of descrepancies have proved very helpful in designing the technical assistance and training (TAT) that will be provided to adopting districts in FY 1976. In particular, it has enabled developers to clarify ambiguities, fill gaps, and correct insufficient explanations in the procedural documents; to identify staff orientation needs; and to focus on techniques for developing essential facilitating skills in the TAT sessions supplied to implementation sites.

The issue of program implementability will be a major object of investigation in FY 1976. Preliminary information on implementability is presently

available from three sources: the implementation plans of the Oakland Schools, the FWL-EBCE implementation experiences of the Fresno Unified School District, and implementation feasibility studies. This information is presented in the next sections.

THE FAR WEST SCHOOL DEMONSTRATION

Beginning in Fall, 1975, the Oakland Unified School District (OUSD) will operate FWS as an alternative high school open to all students within prescribed limitations of staff and facilities. Their current planning is for an initial student body of 215 students (approximately twice the 1974-75 FWS size) using a staff of seven Learning Coordinators (increased from four during 1974-75), a Skills Specialist, a Resource Analyst, and a Program Coordinator. In order to assure design and implementation fidelity, FWL will provide OUSD three weeks of staff training during Summer, 1975, as well as ongoing technical assistance. OUSD will operate FWS as a demonstration site open to visits by interested educators during the 1975-76 school year.

THE EDISON HIGH SCHOOL EBCE IMPLEMENTATION

In April, 1975, the Fresno (California) Unified School District (FUSD), implemented an EBCE program patterned on the FWL-EBCE Model. The program is at Edison High School, an innovative high school in a predominately black neighborhood in Fresno; however, the EBCE program is city-wide and designed to attract a mixed ethnic student body. The program has completed a nine-week spring term and is operating during the summer session.

FUSD representatives attended an orientation session on the FWL-EBCE Model in April, 1974, and implementation-feasibility studies at FWL in October, 1974. At that time, the District made a commitment to FWL-EBCE model adoption. A program director was selected in December; he and other district representatives visited FWS in January for on-site training. Program staff was selected from Edison High School faculty by early February. Once selection was complete, the staff was given 80% of its time to concentrate on EBCE implementation. The EBCE program opened for the Spring term beginning in mid-April, 1975.

During program implementation, FWL provided FUSD with assistance in staff

development, resource recruitment, curriculum planning, and formative evaluation planning. The Edison staff evidenced high motivation and talent; they planned and implemented the program in a period from February through April while still carrying a partial classroom teaching load outside their EBCE program.

For the spring term, enrollment was 33 students; staff consisted of a Program Coordinator/Resource Analyst, two Learning Coordinators, and a Skills Specialist. One additional Learning Coordinator was added for the summer term, when enrollment increased to 73 students.

The early results of Edison-EBCE implementation provide information on their degree of success in getting students to visit resource sites. Preliminary data on students' program structure are presented in Table V-1. The data are separated by Learning Coordinator. Of interest is that students for each LC attained an average weekly time at resource sites ("External hours") of seven hours and an average weekly program-related time of 25 hours (these figures are very close to those recorded by FWS students, see pages 67 and 69. Edison students did, in fact, exceed Oakland students in their reported use of external resources; therefore it is possible that this feature of the model was more faithfully adhered to in Fresno than it was in FWS. The program activity of Edison students peaked during the middle weeks of the term. The last week in their term was aimed at documentation and evaluation of students' learning activities and no resource visits were scheduled.

PRE-ADOPTER PERCEPTIONS OF IMPLEMENTATION FEASIBILITY*

Introduction

With the major thrust of the FWL-EBCE project effort beginning to shift from development and pilot site operation to planning for field testing of the model at other LEA sites, a primary interest centered on factors related to adoption and implementation of the FWL-EBCE model. In response to this interest, program staff planned and conducted a series of studies designed to produce information about the adoption and implementation processes associated with FWL-EBCE.

*For more detailed information about this study, see FWL-EBCE report, A Study of the Feasibility of Field Adoption and Implementation, June 1975.

TABLE V-1

PROGRAM ACTIVITY REPORTED BY EDISON PROGRAM STUDENTS DURING SPRING, 1975
LEARNING COORDINATOR - 1

Week Number	Number of Students	Number of Reports	External Hours					Number of Different Resources Visited			Internal Hours		Total Program Hours	
			RP	RO	CR	Total	Mean Per Student	RPs	ROs	CRs	Total	Mean Per Student	Total	Mean Per Student
1	18	14	0	43	0	43	3.1	0	29	0	145	10.4	188	13.4
2	18	11	14	17	8	39	3.6	6	10	1	169	15.4	208	18.9
3	18	15	55	22	18	95	6.3	12	9	7	267	17.8	362	24.1
4	18	15	98	8	27	133	8.9	18	4	11	291	19.4	424	28.3
5	18	11	82	45	12	139	12.6	20	3	3	246	22.4	385	35.0
6	18	12	66	50	2	118	9.8	15	2	1	286	23.8	404	33.7
7	18	12	76	40	10	126	10.5	17	1	4	209	17.4	335	27.9
8	18	10	24	0	6	30	3.0	8	0	3	193	19.3	223	22.3
9	18	4	6	0	0	6	1.5	2	0	0	60	15.0	66	16.5
TOTAL	162	104	421	225	83	729	7.0	98	58	30	1866	17.9	2595	25.0
Mean	18	11.6	46.8	25.0	9.2	81.0	7.0	10.9	6.4	3.3	207.3	17.9	288.3	25.0

TABLE V-1 (Continued)

PROGRAM ACTIVITY REPORTED BY EDISON PROGRAM STUDENTS DURING SPRING, 1975
LEARNING COORDINATOR - 2

Week Number	Number of Students	Number of Reports	External Hours					Number of Different Resources Visited			Internal Hours		Total Program Hours	
			RP	RO	CR	Total	Mean Per Student	RPs	ROs	CRs	Total	Mean Per Student	Total	Mean Per Student
1	15	3	0	5	0	5	1.7	0	3	0	7	2.3	12	4.0
2	15	8	7	15	4	26	3.3	2	7	2	105	13.1	131	16.4
3	15	8	69	11	12	92	11.5	6	4	2	164	20.5	256	32.0
4	15	5	39	7	3	49	9.8	12	2	2	57	11.4	106	21.2
5	15	13	84	18	7	109	8.4	13	6	4	207	15.9	316	24.3
6	15	14	68	11	10	89	6.4	19	3	4	223	15.9	312	22.3
7	15	13	106	8	13	127	9.8	17	3	4	281	21.6	408	31.4
8	15	6	17	0	6	23	3.8	7	0	2	210	35.0	233	38.8
9	15	1	0	0	0	0	0	0	0	0	25	25.0	25	25.0
TOTAL	135	71	390	75	55	520	7.3	76	28	20	1279	18.0	1799	25.3
Mean	15	7.9	43.3	8.3	6.1	57.8	7.3	8.4	3.1	2.2	142.1	18.0	199.9	25.3

The specific purposes of the studies were to: (1) assess the opinions of school district staffs concerning adoption feasibility and perceived problems related to implementation, (2) identify needed modifications of the FWL-EBCE model, (3) learn about potential users' perceptions of needed training and technical assistance, and (4) help identify implementation aids seen as useful to school districts.

Procedures

Selection of Districts. The approach selected by FWL for the stated purposes was to invite school district representatives for on-site presentations and workshops. Two types of district visits were planned. The first consisted of a one-day awareness and orientation conference and the second was organized to provide several days of intensive observation and study of the FWL-EBCE model in order to obtain information related to the feasibility of adopting FWL-EBCE by districts.

The awareness and orientation conference was held in April of 1974. General information about FWL-EBCE was presented and data were collected concerning the visitors' reactions and extent of further interest. Fifty school districts from a seven-state area were invited. Forty-four districts were represented and a majority indicated strong interest in FWL-EBCE. On a questionnaire designed to elicit their perceptions of barriers to adoption of FWL-EBCE, it was expected that some differences in perceptions among district types (e.g., size, type or location, ethnic mix, wealth) would result. However, no substantial differences vis-a-vis potential barriers to adoption among the districts were found. It was believed that a possible reason for lack of observable differences among district types with regard to the potential barriers was the nature of the information given (primarily orientation) and insufficient time for district personnel to assimilate and generalize this information to their own district needs and characteristics.

The second type of activity, the feasibility studies, was designed to provide an opportunity for teams of district personnel to study the model firsthand with adequate time to observe, discuss, ask questions, make considered judgments concerning its attractiveness and feasibility for their own district, and project a "realistic" plan of adoption and implementation.

Invitations to apply for participation in the feasibility studies were extended to all school districts who had attended the invitational conference. Those districts were asked to complete a form with answers to such topics as:

basis of interest in FWL-EBCE, district staff members who would likely be involved in the studies, and demographic data. Twenty-two districts expressed interest in participating. Eight of those were selected with criteria designed to provide a diversity of district characteristics. Important factors in selection were willingness of districts to send people whose role or positions in the district suggested involvement in adoption decisions and knowledge of district policies, procedures, and characteristics.

Feasibility Study Activities. Teams of participating district representatives spent a full week at the Far West Laboratory. Three days were devoted to in-depth orientation, explanation of procedures, examination of documents, observation of and discussions with students, school staff, and community resource people. The final two days were devoted to completing a specially prepared workbook concerned with adoption and implementation issues.

District personnel were asked to assume that their district was going to adopt all or part of the FWL-EBCE model and to project a most likely scenario of adoption and implementation (i.e., what would be adopted, how and who would be involved, potential problems, etc.) No commitments were required by the Laboratory or by the participating districts.

Data Collection Plan. In order to collect information in an organized manner, the special workbook prepared for the visiting district teams to complete was the primary source of input. The workbook consisted of the following parts: (1) an overview of the FWL-EBCE model, (2) a district description; that is, questions concerned with community and district demographic data, instructional program data, history of adoptions, estimated support of district constituencies for innovations, (3) a guide for adoption decisions in which teams were asked to react to FWL-EBCE in terms of the degree to which the districts' needs, interests, and requirements were consistent with the conceptual framework and operating characteristics of the FWL-EBCE model, (4) a description of the FWL-EBCE model to be adopted, in which teams responded to items concerned with specifying the nature of the program to be installed, reasons for the selections, existing conditions in their district that might facilitate or hinder adoption, and (5) implementation planning, in which teams were asked to think about and record a probable implementation process in terms of tasks that need to be performed to ensure smooth implementation.*

*These scenarios as well as other data are presented in the full report of the study.

A major section of the workbook was devoted to collecting reactions to the FWL-EBCE model vis-a-vis perceived adoption barriers. For this study, 15 FWL-EBCE program characteristics were used as a basis for developing a number of multiple-choice items. Each program characteristic (e.g., teacher role, student role, curriculum content organization) was described briefly with each description followed by items soliciting responses to the characteristics. Responses to the items were given values of 0, 1, 2, or 3 with an 0 response meaning no perceived barrier, a 1 meaning a minor barrier, a 2 meaning a moderate barrier, and a 3 standing for a major barrier.

Responses to rating scale items were coded and combined in three ways for examination. First, mean scores for each program characteristic (by district) were computed by combining sets of items relating to each characteristic. Second, the items for each district were recombined into sets corresponding to five "potential discrepancy areas" (i.e., need for program, incentives for adoption, philosophical slant, resources required, and adoption convenience). Third, the responses were examined in terms of frequency of assigned values for both program characteristics and discrepancy areas in order to obtain an overall profile of the participating districts' major concerns and least concerns. Finally, the relationship between high and low scoring districts and their present known commitment to adoption were examined.

Results of Study

Combination of the various ratings given toward FWL-EBCE program characteristics by district teams were as follows:

1. Mean scores of program characteristics by district. Generally, the lowest means for all program characteristics (interpreted as least amount of perceived discrepancies and thus fewest barriers to adoption) were recorded by LEAs self-described as having urban characteristics* (see Table V-2). The highest mean scores (moderately perceived discrepancies and thus moderately strong barriers to adoption) were obtained from predominately suburban districts.** Other

*The one exception, a suburban/rural county wide school system actually scored the lowest. However, this system is regionally recognized as innovative and prone to adoption.

**Whereas the possible range of responses to perceived discrepancies was from 0-3, the recorded range was 0-2; i.e., no district indicated major discrepancies among the items.

TABLE V-2

DISTRICT MEANS BY PROGRAM CHARACTERISTICS ON A RANGE 0-3

Characteristics	Weber County (UT)	Stockton Unified (CA)	Fresno Unified (CA)	Salt Lake City (UT)	Dallas Independent (TX)	Simi Valley Unified (CA)	Washoe County (NV)	Grossmont Union (CA)	Characteristic Mean Across Districts
1. Program Scope	0.33	0.66	1.33	0.33	1.00	1.66	1.66	1.33	1.04
2. Content Scope	0.00	0.00	0.50	0.50	1.50	0.50	1.00	1.50	0.69
3. Content Org.	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	1.13
4. Teacher Function	0.66	0.66	0.66	1.00	1.00	1.00	1.33	2.00	1.04
5. Student Function	0.33	0.00	0.33	0.66	0.66	1.00	1.33	1.00	0.66
6. Teacher/learning method	0.00	0.00	1.00	1.00	0.00	1.00	1.50	1.50	0.75
7. Student Grouping	0.00	1.00	1.00	1.00	2.00	1.00	1.00	2.00	1.13
8. Materials	0.00	0.00	0.00	0.66	0.00	1.00	1.00	1.33	0.50
9. Physical Setting	0.00	0.00	0.00	0.00	0.00	1.00	1.00	2.00	0.50
10. Student Evaluation	0.00	0.50	0.00	0.00	0.50	0.50	1.00	0.00	0.31
11. Use of Time	0.00	0.00	0.50	0.00	0.00	1.00	1.50	1.00	0.50
12. Intended Outcomes	0.00	0.00	1.00	0.00	1.00	1.00	0.50	0.50	0.50
13. Governance	0.00	0.00	0.00	0.00	0.00	0.00	1.00	0.00	0.13
14. Cost	2.00	1.00	0.00	1.00	0.00	2.00	2.00	2.00	1.38
15. Conformity with Tradition	0.50	1.00	0.50	1.00	1.00	1.00	1.50	1.00	0.94
Mean for all characteristics by district	0.32	0.39	0.52	0.54	0.64	0.98	1.22	1.28	

characteristics such as history of adoptions, support for innovations by various constituencies, the dominant mode or style of the teaching/learning process in secondary schools are probably important issues, but must be tempered by other factors. For example, a suburban district with strong teacher control of the content and procedures of classroom instruction and minimal support for change may be less than an enthusiastic adopter of FWL-EBCE. But in urban districts, even where more traditional modes and methods may dominate, perceived acceptance of FWL-EBCE is seen as relatively high. It is likely that urban LEAs that are experiencing specific problems (e.g., pressure for alternative programs, high dropout rate, etc.) are more willing to expend the necessary resources, in spite of possible barriers, in the hope that one or more problems can be resolved.

It is interesting to note that the mean of all program characteristics computed for each district apparently has some degree of predictive validity in that most low scoring districts have seriously pursued adoption of FWL-EBCE while those with high means have verified their responses by inaction with regard to FWL-EBCE. Follow-up contact by project staff with all participating districts was the basis of verification. Whether the relationship between low scores on items and likelihood of adoption is predictive or simply the result of chance is unknown at this time. Table V-3 shows the relationship between districts with high and low discrepancy (perceived-barrier) scores and their present commitment to adoption.

TABLE V-3

RELATIONSHIP BETWEEN DISTRICTS WITH HIGH AND LOW DISCREPANCY SCORES AND THEIR PRESENT COMMITMENT TO ADOPTION

Item	Districts Rejecting FWL-EBCE	Districts Still in Decision Process	Districts Adopting FWL-EBCE	Total
High Discrepancy Scores	3	0	0	3
Low Discrepancy Scores	0	2	3	5
Total	3	2	3	8

2. Mean scores of discrepancy areas by district. With only one exception, districts' mean scores arranged themselves in the same rank order as before; that is, districts who have subsequently proven themselves seriously interested in adoption of FWL-EBCE obtained the lowest scores (see Table V-4).

3. Frequency of concerns across districts. Tables V-5 and V-6 show a rank ordering of items based on zero perceived discrepancies between the program itself and the district conditions seen as necessary for adoption. With regard to program characteristics (Table V-5), the data could be interpreted to mean that the respondents' major areas of concern were focused on staff acceptance of the roles of teachers and students, how the curriculum is organized and structured, multi-grade grouping of students, and cost. Areas of least concern included administration, student evaluation, curricular/student management and program outcomes.

With regard to the five major discrepancy areas (Table V-6), the area of least concern was that of possible discrepancies between resources required for the program and resources available in the district. Excluding the possibility of excess costs required for start up and operation, this area

TABLE V-4

DISTRICT MEANS BY DISCREPANCY AREA ON A RANGE 0-3

Discrepancy Area	Weber County (UT)	Stockton Unified (CA)	Salt Lake City (UT)	Fresno Unified (CA)	Dallas Independent (TX)	Simi Valley Unified (CA)	Washoe County (NV)	Grossmont Union (CA)
Need	0.17	0.17	0.17	0.83	0.57	1.50	1.00	1.00
Incentives	0.50	1.00	0.50	0.50	1.00	0.50	0.50	2.00
Philosophies	0.40	0.29	0.57	0.71	1.14	0.85	1.43	1.14
Resources	0.40	0.20	0.00	0.40	0.20	0.80	1.60	1.20
Adoption Conversion	0.22	0.44	0.67	0.73	0.44	1.00	1.22	1.33
Mean for all discrepancy areas by district	0.34	0.43	0.51	0.50	0.69	0.93	1.15	1.33

included the issues of materials, physical space, time, personnel, and administrative arrangements. The next area in order of least concern was the need for the program which assessed such issues as the scope of the program and student grouping procedures, type of effect, and the subject matter. Third in order of least concern was adoption convenience, made up of factors such as adaptability, divisibility, reorganization or training required, potential disruptions, and its accessibility. Fourth in order, items assessing perceptions toward the philosophical slant of the program, dealt with the curriculum content organization in terms of its sequence and structure, theoretical basis, self-sufficiency, and type of evaluation. Finally, and registered as of most concern, was incentives for adoption. This area consisted of items asking about early/late knowledge of results, probability of outside funding, and importance of peer opinion.

TABLE V-5

FREQUENCY PERCENTAGES ACROSS DISTRICTS BY PROGRAM CHARACTERISTICS
(RANK ORDERED BY RECORDED ZERO DISCREPANCY)

Program Characteristics	0 (no discrepancy) %	1 (minor discrepancy) %	2 (moderate discrepancy) %	3 (major discrepancy) %
1. Governance	100	-	-	-
2. Student Evaluation	75	19	6	-
3. Physical Setting	63	25	13	-
4. Materials	58	33	8	-
5. Use of Time	56	38	6	-
6. Intended Outcomes	50	50	-	-
7. Content Scope	44	44	13	-
8. Student Function	38	58	4	-
9. Teaching/learning Method	38	50	13	-
10. Teacher Function	38	21	42	-
11. Program Scope	25	45	29	-
12. Cost of FWL-EBCE	25	25	50	-
13. Conformity with Tradition	13	81	6	-
14. Student Grouping	13	63	25	-
15. Content Organization	-	88	13	-

TABLE V-6

FREQUENCY PERCENTAGES ACROSS DISTRICTS BY DISCREPANCY AREAS
(RANK ORDERED BY RECORDED ZERO DISCREPANCY)

Discrepancy Area	0 (no discrepancy) %	1 (minor discrepancy) %	2 (moderate discrepancy) %	3 (major discrepancy) %
1. Resources Required	60	23	18	--
2. Need for Program	46	40	15	--
3. Adoption Convenience	42	40	18	--
4. Philosophical Slant of FWL-EBCE	33	58	8	--
5. Incentives for Adoption	31	56	8	--

The frequency percentages for each discrepancy area were computed by combining responses to several related program characteristics (see Table V-2). However, frequencies for each discrepancy area are not necessarily reflective of a particular program characteristic. For example, the discrepancy area of resources required was regarded by this sample as the least likely problem--but "cost of installation" (one of the characteristics associated with resources)--was viewed by some as a potential problem.

Conclusions

Adoption and Implementation Feasibility. All eight district teams were strongly and favorably impressed with the FWL-EBCE model's attractiveness and potential for responding to educational needs. Five of the eight saw it as immediately adoptable and have taken steps toward its implementation. Three districts identified problems associated with adoption and listed such factors as "probable lack of support by important segments of the teaching staffs for the philosophical slant of FWL-EBCE"(e.g., student time in the community, degree of student control over learning content and procedures, multi-age grouping of students, the teacher's role); "cost of installation," "existing career education programs for which considerable financial and emotional investment exists," and "transportation problems."

Districts who viewed the FWL-EBCE model as suitable for their district were most likely to have urban characteristics (although there were exceptions). They were most likely to have a history of past successful adoptions of innovations; they were likely to have identified problems, (e.g., high dropout rate, segregation, etc.) for which they saw FWL-EBCE as a possible solution; or they were likely to have pressures from students, staff, or community for alternative programs. These pro-adoption characteristics perhaps are best seen as motivaters that are important and necessary in addition to district's acknowledgement of the attractiveness of the model itself. Thus, even though the FWL-EBCE model might be viewed as an attractive alternative educational program, certain district conditions are probably crucial to its adoption.

Suggested Modifications of FWL-EBCE. Generally, district teams had no suggestions concerning needed modifications in the model's learning process or in procedural documents. They felt that the learning process was well-grounded and that program documents were well done and usable.

Perceptions of Needed Training and Technical Assistance. All districts indicated the importance and need for staff development and technical assistance and in some cases were able to specify areas of need. Primary areas included orientation to the nature of FWL-EBCE, assistance in recruiting and developing resources, and project-planning package development. Most districts felt that they had staff who could successfully perform the various roles associated with FWL-EBCE. Current experience in working with adopting districts and responding to their perceived training and technical assistance needs will undoubtedly provide FWL with much valuable information about important staff development areas and technical assistance needs as well as workable procedures to effect such help.

Implementation Aids Seen as Useful to School Districts. Three general need areas have emerged, particularly from those three districts for which immediate adoption was believed not feasible. They were: (1) a way of orienting district or school staffs and other constituency groups to the rationale, purposes, program design, and operating procedures of FWL-EBCE, (2) ways of implementing FWL-EBCE into a school or district that are non-disruptive to existing programs or staff, and (3) materials that can be used to help districts evaluate the program following installation.

Unsolicited Comments. The visitors voiced unanimous approval of the FWL-EBCE model. Positive comments included such factors as: (1) the degree to which students were truly involved and participating in the learning process, (2) the degree to which resource people in the community interacted with students and were able tc impact on students' plans and progress, (3) the healthy learning climate that was observed to exist between students and Learning Coordinators and among students, and (4) the extent to which conversations with students revealed a general satisfaction with their school.

The Approach Used. The approach used in this study was judged to be a valuable means of assisting developers with issues related to product refinement and dissemination efforts. The discrepancy model was judged to be useful as a springboard for item development and data organization. Further, district participants were intrigued with the potential of the instrument for identifying potential barriers to adoption within their districts and where their efforts might need to be applied. This aspect of the feasibility studies became increasingly important to participating districts as they began to seriously consider the feasibility of adopting FWL-EBCE. Thus, what was designed primarily as a

simulation activity became a real occasion for adoption and implementation planning.

It is believed that following revision of the item set, it may become a useful tool to help project staff to identify those districts who possess the greatest potential as implementation sites.

COST EXPERIENCE AND PROJECTIONS

FY75 Cost Experience

From a contractual standpoint, the Laboratory's responsibility for the operation of Far West School ended on August 31, 1975. At that time its operation became the responsibility of the Oakland Unified School District. From the standpoint of actual school operations, however, the transition was complicated by the realities of school/community and day-to-day operating constraints. These same constraints also make the FY75 cost reporting complex. For example, the Laboratory terminated its rental agreement for FWS space on July 15, but certain other agreements terminated at different dates. Some of those FWS staff members involved solely in the instructional program were terminated as Far West Laboratory employees on June 30 or August 31; others began a transition from Far West School operations to district staff training and technical assistance, development of training materials, and/or planning for FY76.

Thus determining and separating costs related to the Far West School from those of the FWL-EBCE program is complicated and will not be completed until late October or early November, after the initial closing of the FY75 contract. At that time, FWL will report FY75 costs in categories adopted by all four EBCE projects in December, 1973. As a rough estimate, it is anticipated that the FY75 per student cost will be approximately $1,700 plus Far West Laboratory overhead.

Another FY75 cost report will be available on the Fresno adoption of FWL-EBCE. It is the first whole-model adoption, and was financed entirely from resources already available to the district. This report should be of even greater interest to potential adopters than the report of Far West Laboratory costs. Additionally, the Fresno report will use a standard school accounting format, which may help make it an effective tool for giving technical assistance. The FY75 Fresno cost data will also be available in November, 1975.

FY76 Cost Projections

The staff experience in orienting school district personnel to FWL-EBCE has shown that FWL must be prepared to discuss costs in the same context and format that is used by school administrators when they deliberate school district budgets. Fortunately, the FWL report, Cost Comparison Study on EBCE Replication (April 19, 1974), has proved to be useful to potential adopters. It is anticipated that the FY75 experience will provide even more useful information because a comparison can be made between the projections in the cost comparison study and the actual costs. Additionally, the budgets for FY76 in Oakland, Fresno, and other districts with which FWL is working will be available.

During FY76, FWL will prepare a "stand-alone" document on FWL-EBCE costs containing a review and summary of the prior FWL-EBCE cost studies, together with an analysis of the FY75 Oakland and Fresno cost experiences. The intended audience will be primarily those persons from LEAs who are considering adoption of FWL-EBCE, and who have begun to think seriously about its potential scope and staffing plans. Publication of the cost document is targeted for late November, 1975.

CHAPTER 6:

Summary and Conclusions

CHAPTER VI: SUMMARY AND CONCLUSIONS

SUMMARY

1974-75 was the year for performance testing the FWL-EBCE model and for accumulating evaluative information from experience with Far West School for model implementers. Below is a summary of evaluation findings for the year.

Students in Process, 1974-75

Recruitment

1. Recruitment efforts were successful in achieving the goals of the sponsoring agency (NIE): an enrollment at FWS of 100 and a control group of at least 55. In fact, 108 students were enrolled, made up of 24 returning students and 84 students new to FWS. Of the 84 newly entered students, 64 had been randomly selected from FWS applicants and were designated as the "experimental group." A corresponding "control group" with 88 participants was formed from the applicants not selected for admission to FWS.
2. The recruitment campaign was more successful in junior high schools than in senior high schools, attracted more females than males, and attracted more black students than white students. The resultant student body was 59 percent female and 41 percent male; 43 percent 10th graders, 31 percent 11th graders, and 26 percent 12th graders; and 45 percent black, 41 percent white, 7 percent chicano, and 7 percent other ethnicities. Compared with the previous year, the student body was more representative in ethnic composition to the Oakland high schools, but less representative in terms of sex and grade.
3. Students indicated that they came to Far West School to find out about careers, to receive more individual attention in their educational activities, to get into a program different from regular school, and to participate in learning experiences outside of the school.

Attrition

4. During the school year enrollment at FWS decreased from 108 to 96. Actually, fourteen students left FWS, two of whom graduated at mid-year.

Two new students were admitted at that time. Most students who left FWS returned to their regular high school. Only four FWS students left high school during the year, a dropout rate of 4%.

Graduating Seniors

5. Twenty-four students graduated from FWS during the year. Most are college bound. Twenty-two of these students plan on continuing their education, twelve of them while working concurrently. One student plans no further education; one did not indicate her plans. These expressed plans for further education are probably not far from reality, based on reports from previous graduates. Of 26 previous graduates questioned in the spring, 73 percent had enrolled in post-secondary educational institutions.

Students at Year-End

Future Planning

1. FWS students felt strongly (mean rating of 4.5 out of a possible 5.0) that the FWS provided much more opportunity for making plans for the future than did regular schools. Experimental students rated their program significantly higher than did control students on its helpfulness in deciding on post high school plans. More FWS students (88%) than control students (52%) felt that their program was helpful for planning a career.

2. One-year post high school plans, as determined by a check-list, did not show major differences between experimental students and returning or control students, except for an increased frequency of responses per student in the FWS experimental group; this may indicate an increased awareness of available options for the experimental group.

Career Exploration

3. FWS students felt the program was very helpful in teaching them how to match what they know about themselves with possible careers and that their project activities had helped them to learn about careers.

Attitude Toward School and Learning

4. FWS students indicated that they liked the learning method used at FWS

and that they felt more motivated to learn than in their previous programs.

5. On eight of twelve ratings of usefulness of their school program FWS experimental students had higher mean ratings than control students. FWS students gave significantly more positive responses than did control students on an open-ended question on likes and dislikes for their current program. Twenty-seven percent of the control group felt that their program was not much good for either career planning or academic work; only 2% of experimental students felt similarly.

6. FWS students felt (mean rating of 4.5 out of a possible 5.0) that FWL-EBCE is a needed program in the school district. However, although most students felt that they would choose to attend FWS if they had the choice again, a small group (nine) of FWS students said they would not choose to participate again.

Self-Development

7. Experimental students rated the program significantly higher than did control students in helpfulness in self-expression and in meeting/dealing with people. Out of seven program areas they gave the highest rating to developing interpersonal skills.

General Learning

8. The control group chose preparation for college as the way their school program was the most helpful, while FWS students chose preparation for work. On another set of scales, control students rated their programs highest in health/fitness and in mathematics while experimental students stressed meeting and dealing with people and self-expression. Returning students were favorably impressed with the help they had received in writing. No difference was seen in ratings of program helpfulness in reading among the experimental, returning, and control groups. Although FWS students tend to rate opportunities for general learning lower than other program characteristics, they do not see the program as deficient in general learning. The exception may be mathematics, which was rated marginally low.

Graduates One or Two Years Later

Many items in questionnaires gave no evidence of program effects through

comparison of the experimental and control group. It is entirely possible that some values or effects of a FWL-EBCE program are not manifested until some time after the students leave high school. With that possibility in mind, graduates were questioned after they had been out of high school for a year or two.

Attitudes Toward Far West School

1. Graduates who had been out of the program for one or two years continued to rate the program highly. They felt strongly that the program provided much more opportunity for learning about careers (mean rating of 4.7 out of a possible 5.0) and for making plans for the future (mean rating of 4.6 out of a possible 5.0). They rated the program high for helping them interact effectively with others. Graduates express even more positive feelings than current students about both the learning methods and the increased motivation to learn at FWS.

Current Activities

2. Of the graduates who were questioned one year after graduation, 61% are working at least part time; 33% full time. Sixty-one percent of the graduates are enrolled in college. A few others are getting some kind of vocational or technical training.

Plans for Work and Education

3. Future plans of graduates of the program are more comprehensive in content than plans of younger students. When asked to write about their plans, almost one-half of the graduates mentioned a combination of working, study, and pursuit of one or more career areas. Only 18% of FWS experimental students mentioned all of these areas; they most frequently had plans to work and go to school (39%) but had not yet related these activities to a specific career or careers. Graduates' plans were also more complex in terms of the number of stages covered. While the experimental students might plan one or two steps ahead, most FWS graduates had plans with at least three stages.

4. In five years, about 58% of the graduates plan to be working at least part time while 27% plan to still be in college. Few FWS experimental students plan to be in school in five years; it appears that the older students and those with more experience in the FWS program (returning students) are more realistic about the amount of time required to complete an academic program.

Use of Program Resources

1. The self-report record of the student weekly activity at resource sites (i.e., with an RP, RO, or CR) showed an average somewhat above five hours per week. The range is from zero hours/week (two students) to 18.1 hours/week. The FWL-EBCE established the standard for a student's total weekly resource-related activity at 7.5 hours/week. Sixty-three of the 87 students for whom SAR data are available did not report this much direct contact. Community activities that were not at resource sites were common, but data on it were not collected this year. Each week, approximately two-thirds of the FWS students reported visiting at least one external resource; only two students did not make some resource contact during the Spring sememster. However, this contact was minimal for many students: 22 students averaged two or fewer hours per week at resource sites.

2. Participation in supplementary (non-project) learning activities was a variable factor in students' programs. The most common such activity was a tutorial in English. Almost 70 percent of the entering students took a writing or grammar tutorial (a lower proportion of returning students enrolled in such tutorials).

3. FWS students averaged 4.6 credits, of which 2.1 were project related, 1.5 resulted from supplementary activities, and 1.0 was credit for physical education. The mean-credit earned by students was below the 5.0 credits representing normal progress toward graduation. Returning students averaged 5.4 credits; entering experimental students averaged 4.4 credits; other entering students averaged 4.3 credits. The evidence is that many of the randomly-selected experimental students (and other entering students) performed at a level below that desired.

4. At the beginning of the school year FWS students had been asked to check on an initial planning worksheet any areas in which they would like extra help. The group requesting help in mathematics (the most frequently requested area) found the FWS program equally as helpful (mean rating of 2.50 out of 3.0) as the control students found their program (mean rating of 2.46 out of 3.0) while other FWS students groups rated mathematics assistance lower than did controls.

5. Students saw as most successful certain central concepts of the FWL-EBCE model. When asked to rate each of 19 special program activities, they gave highest success ratings to three areas of learning--about careers, to make decisions, and about oneself--which are student objectives within the FWL-EBCE model. They also rated highly two types of planning--project planning and planning for future careers. In addition they saw as highly successful the one-to-one relationships with adults that are characteristic of the FWL-EBCE model--individual meetings with LCs and visiting resource persons. Three items on the scales were rated below the positive level by more than one-half of the students--social activities, going to advisory-group meetings, and using learning packages.

Differential Effects on Students

Questions were explored as to which kinds of students make use of particular program elements from among the many available to them, and what are the outcomes of this student-treatment interaction. A number of hypotheses were derived from a descriptive analysis of relations among measures of student characteristics, program treatments, and outcomes. Examples of the hypotheses are:

- Younger students make more use of the school center, especially the features that help them in meeting English and math requirements, and earn credit predominantly through supplementary learning activities.
- There are students who have a generally negative feeling toward the world of work, who stay at the school center much of the time, and who are seldom involved in the external learning experiences in the community.
- Those students with previous paid work experience are among the most satisfied with their progress in basic and academic skills and with their one-to-one association with LCs.
- There are moderate critics of school who are making maximum, effective use of the program, are participating fully in the community learning experiences, and are earning both project and supplementary activity credit.

Early Stages in Implementing the Model

Experiences in Oakland and Fresno

1. During the 1974-75 performance test, FWS operations were monitored by members of the FWL-EBCE development staff. Although in some cases procedures were revised to be more realistic and in other cases unintentional deviations from specified procedures were detected, brought to FWS staff attention, and corrected, the main purpose of this effort was to develop project implementation documents, training materials, and methodologies for staff training for use in FY76 at adopting sites.

   During this period, intensive work continued with two of the planned FWL-EBCE implementation sites--Oakland Unified Schoool District and Fresno Unified School District. Whereas Oakland (the FWL-EBCE demonstration site) planned for a Fall 1975 opening, Fresno began its program in the spring of 1975, operated during the summer, and is readying for a fall continuation.

Assessments of Adoption Feasibility

2. In response to an interest in factors related to adoption and implementation, FWL staff planned and conducted a series of studies with districts designed to produce information about these processes. Teams of district representatives spent a full week at the FWL devoted to in-depth orientation, explanation of procedures, examination of documents, observation of a discussion with students, staff, and community resource people, and completion of a workbook concerned with adoption and implementation issues.

   All eight teams were favorably impressed with the FWL-EBCE model and five have taken steps toward its implementation. With regard to possible problems associated with implementation, several factors were listed as minor to moderate. They were support by segments of the teaching staff for the philosophical slant of the model; cost of installation; existing and entrenched career education programs; and transportation problems. Districts who viewed the FWL-EBCE model as suitable were most likely to have (1) urban charac-

teristics, (2) a past history of successful adoptions, and (3) identified problems for which FWL-EBCE was seen as a possible solution.

CONCLUSIONS

From the information presented in this report, several conclusions can be drawn.

1. The results of recruitment for the 1974-75 school year demonstrated that there is a substantial audience within Oakland for FWL-EBCE. Over 300 students applied for 100 openings at FWS; this group was reasonably representative of Oakland high school population in terms of ethnicity, socio-economic background, and sex. In terms of numbers of applicants, recruitment was more successful at junior high school than at senior high schools; hence, the tenth graders outnumbered the eleventh and twelfth graders.

2. During the initial three-week period of student orientation, approximately 10% (7 out of 71) randomly-selected new students chose to return to regular high schools. No other students withdrew from FWS during this period. Some withdrawals were anticipated among the new students and are considered likely in any program using random choice without any screening as the method of selection among applicants.

3. During the year (after the orientation period) 12 students withdrew from FWS. Six of these were from the randomly-selected group of new students (out of 64), two were from the group of other new students (out of 20), and four were from the group of students returning from the previous year (out of 24). Eight of these 12 students transferred back to regular high school. Four students dropped out of high school; thus FWS had a drop-out rate of 4% during the 1974-75 school year.

4. While the model was implemented in its essential aspects at FWS, some discrepancies were observed between what the model prescribes and what actually occurred. For example, there was insufficient use made of group meetings on Project Planning Packages; monitoring of students' learning activities at resource sites was sometimes

inadequate; and credit was awarded to some students with insufficient prescribed documentation. Observations and analysis of these discrepancies have resulted in necessary modifications to FWL-EBCE model procedural documents, implementation documents, and staff-training methodology.

5. Attitudes of students toward school and learning improved during the year. Their opinions of the worth of the FWL-EBCE program in general were quite positive. Attitudes of FWS graduates toward the program continued to be highly approving after having been out of the program one or two years.

6. FWS students saw the program as offering an increased opportunity for learning about careers and making plans for the future. They were quite satisfied with their development of self-expression and interpersonal skills and with their growth in independence and responsibility. They were less satisfied with their progress in mathematics and health/fitness than were their counterparts in regular high schools.

7. The program was successful in providing an alternative curriculum through which credits were awarded mainly for project-related activities. Other credits were earned through supplementary learning activities, such as courses at community colleges and individual or small-group tutorials in basic skills and in technical subject areas needed for college preparation.

8. All 24 graduates of the 1974-75 program met graduation requirements of the Oakland Unified School District. Most of them plan on further education. Seventy-three percent of prior-year graduates are currently enrolled in educational programs either part or full time; 61% of the prior graduates are working either part or full time.

9. The program appears to have differential effects on the students, depending on both the particular activities they participate in and their own, individual characteristics. Understanding of these interrelationships by school staff may be helpful in bringing about more effective student program planning.

10. On the basis of earlier evaluation findings the USOE/NIE Joint Dissemination Review Panel has approved FWL-EBCE for dissemination. From the recent feasibility study by FWL, it is evident the model is attractive to school representatives. Many of them believe it can be adopted using their own resources. Although the model can be adopted in part or in whole, the first school district adopter (after Oakland) did implement a program with high fidelity to the model.

APPENDICES

APPENDIX A

EXCERPTS FROM TECHNICAL MEMORANDUM 6: CHARACTERISTICS OF APPLICANTS AND ENTRANTS TO FAR WEST SCHOOL, FALL 1974

Summary of Findings

When students leave a conventional school program for an alternative high school, they move through several decision-making steps such as deciding to seek information about the new program and deciding to apply, to attend, and to stay in it. There is an element of risk-taking in enrolling in any unconventional school program. What are some of the characteristics of students who apply for such a program? What factors in the selection process may affect student decisions to enroll? Do those students who eventually enter and remain in the alternative program differ in any way from those who chose not to enter or not to remain in the program?

To study these questions, Far West School (FWS) undertook an analysis of the application forms submitted by 283 applicants for the 1974-75 school year.* As a result of the study, a partial picture can be formed of the students comprising the applicant pool. The pool clearly differs from the main body of the Oakland Public School students in two aspects: it is predominantly composed of tenth grade students, and it is almost two-thirds composed of females. In other respects its similarity to the general student body is not known. Free time activities reported by the students appeared to be basically similar for those enrolling and those not enrolling. This suggests that within the pool the students enrolling are not those with more solitary interests.

There were three factors that seem to differentiate those enrolling from those choosing not to enroll. Students from the lower SES schools are more likely to enroll in FWS if they have the opportunity. Students from two-parent families are more likely to enroll, and students who live with at least one parent or guardian with the same last name are even more likely to enroll in the school or to participate in the control group. This seems to imply that certain factors related to family composition may affect student decisions.

*Total number of applicants was 287. Application forms were not available for four students, leaving a total of 283 students in the application form study.

There is no indication from the data that students from more difficult home situations are more likely to be those among the applicants who decide to enroll in the school. Finally, students who enroll in the school are more likely to have friends in the school and less likely to have made a decision to enter only on the basis of information from a formal presentation of the school program.

Further Amplification of Three Questions From the Study

1. Where did the students come from? How did they find out about FWS? Respondents were presented with a list of possible sources of information. There were 367 responses to this question by 280 applicants (three left the item blank). Percentages for different sources are shown in Table A-1. By far the most frequently mentioned source were the presentations made by FWS students and staff members at meetings held during the spring of 1974 at the various high schools and junior high schools in Oakland. At these meetings application forms were available and students were encouraged to fill them out. Further meetings were held at FWS where students were again encouraged to complete application forms. Other sources of information were relatively scattered. Twelve percent mentioned a friend at FWS and 17 percent had seen posters about the school.

When those entering and those chosen but not entering are compared, it can be seen that almost 50 percent of the responses of those not entering mentioned the school presentation and none mentioned "friend at FWS." Fewer of the entering group mentioned the school presentation, and 17 percent of the responses mentioned a friend at FWS as a source of information. Those entering were also more aware of posters (23%) than those not entering (11%). Those students who were not chosen by the pool for admission but who did agree to enter the control group resemble the entering group more than those chosen but not entering. Only 30 percent of the control group responses mentioned the school presentation; they reported more friends in the school than non-tested controls, and they also were more aware of the posters (25% as compared with 16%). It appears that having information about FWS from a friend is an important factor in deciding to enter the school or the control group. The most important source of information is definitely the school presentation, but back-up from others with personal knowledge and perhaps also from posters may assist the student in making a decision to enter.

TABLE A-1

SOURCES OF APPLICANT INFORMATION ABOUT FWS,
PERCENT OF TOTAL RESPONSES*

Source	Entered FWS N=59 %	Chose Not to Enroll N=43 %	Entered and Dropped N=12 %	Tested Controls N=88 %	Untested Controls N=81 %	Total Pool N=283 %
School Presentation	33	48	50	30	41	37
Counselor or Teacher	6	8	11	9	8	8
Friend at FWS	17	8	-	12	9	12
Other Friend	3	4	11	7	10	7
Parent	1	4	-	2	3	2
Poster at School	17	12	11	23	15	17
Poster Elsewhere	6	4	-	2	1	3
TV	4	-	-	3	1	2
Radio	6	-	11	3	5	4
Newspaper	4	-	6	2	1	2
Other	3	12	-	5	5	5
Blank	-	-	-	2	1	1

* Total number of responses was 367.

2. What is the family composition? With whom does the student live? Applicants were asked to give their names and addresses and those of mothers, fathers, or guardians. By putting these pieces of information together it was possible to construct a picture of the students' living situations and who exercised responsibility over them. Student responses were placed in different categories depending on whether the name of the person given was the same or different from that of the student and whether the address given was the same or different from that of the student. Table A-2 summarizes these data.

As can be seen from Table A-2, 42 percent of the applicants live in a two-parent family where the parents have the same name as the student. Another nine percent live in a family where the parents/guardians have a different last name from the student. In all, 51 percent of the students report living at the same address with a mother/guardian and a father/guardian. Another 20 percent of the students report living with one parent and give the name of the other parent either at another address or without an address. Twenty-four percent list only one person as being in a position of responsibility toward them. Overall, 31 percent of the students live in a home situation where the responsible person(s) had different last names.

TABLE A-2

FAMILY COMPOSITION:
TOTAL APPLICANT POOL (N=283)

Student Residence	Name of Person Lived With		
	Same %	Different %	Total %
Two-parent family	42	9	51
Two parents listed, lives with one	12	8	20
One-parent family	15	9	24
No parent at student's address	0	5	5
TOTAL	69	31	100

An examination of the original experimental group indicates that a higher percentage of students who actually enter the school come from two-parent families. Table A-3 shows that 10 percent fewer non-enrolling students come from such families. In contrast, this group has 12 percent of its students living in situations where they report their own address as different from that of either parent. The small group of students who dropped from the program shows the lowest percentage of students in two-parent families.

TABLE A-3

STUDENT RESIDENCE OF APPLICANT POOL GROUPS

Student Residence	Entered FWS N=59 %	Chose Not to Enroll N=43 %	Entered and Dropped N=12 %	Tested Controls N=88 %	Untested Controls N=81 %	Total Pool N=283 %
Two-parent family	54	44	42	55	50	51
Two parents listed, lives with one	20	26	25	17	20	20
One-parent family	23	18	25	26	25	24
No parent at student's address	3	12	8	2	5	5

Table A-4 shows the distribution for the five groups on the similarity or difference of name of the parent/guardian with whom the student resides. Eighty-two percent of the students who enrolled in the program came from homes where at least one parent had the same name as the student. In contrast, 60 percent of the students who chose not to enroll lived with a parent with the same name. A similar trend can be noted in the non-selected group where a

TABLE A-4

SIMILARITY OF LAST NAME OF PARENT/GUARDIAN
FOR GROUPS IN APPLICANT POOL

Surname of Parent/ Guardian	Entered FWS N=59 %	Chose Not to Enroll N=43 %	Entered and Dropped N=12 %	Tested Controls N=88 %	Untested Controls N=81 %	Total Pool N=283 %
Same*	82	60	58	74	61	69
Different	18	40	42	26	37	31

* Student lives with at least one parent/guardian with the same last name.

higher percentage of the students who cooperated and participated in the testing program live with parents of the same name than do non-cooperating students.

It is difficult to draw definite conclusions from these data, yet it can be said that students reporting living with two parent/guardians and with a parent/guardian of the same name are more likely to enter the FWS program if given an opportunity to do so. Such students, if not able to enter the program, may be more willing to cooperate with the control group.

3. What are the free time activities of applicants? Asked on the application form to indicate free time activities, seven percent of the students did not mention any activities; the remainder listed from one to nine (or more) activities.

Table A-5 shows student activities ranked by percent of students reporting. Sports was the most popular activity, mentioned by 53 percent of the students; 151 students listed 275 different responses to this question. Creative arts was the second most popular category with 97 students listing 158 responses. About one-third of the students mentioned reading and about one-fourth listed outdoor hobbies such as hiking, gardening, and camping.

TABLE A-5

FREE TIME ACTIVITIES OF APPLICANTS

Rank	Category	Percent of Students	Number of Students	Number of Responses
1	Sports	53	151	275
2	Creative Arts	34	97	158
3	Reading	31	87	87
4	Outdoor Hobbies	23	65	90
5	Records, Radio, T.V.	19	53	62
6	Social Activities	17	48	60
7	Indoor Hobbies	17	47	66
8	Bicycling	15	43	43
9	Domestic Arts	12	34	49
10	Volunteer, Community Work	10	27	41
11	Academic Interests	6	18	21
12	Being with Friends	6	16	17
13	Babysitting	5	13	13
	Other	16	44	48
	None	2	5	5
	Blank	5	14	14

Table A-6 compares the free time activities of the five subgroups. The differences between groups appears to be less noticeable than the several differences between the total experimental and the total control groups, which were randomly selected. This is shown in the second-ranked item, creative arts, and the third-ranked item, reading; in both instances the original experimental group had a higher percentage of entries than the original control group. The group which chose not to enroll showed slightly more interest in reading, outdoor hobbies, domestic arts, and community work than the entering group which appeared to have a greater interest in social activities. In general, the interest patterns of the students who entered FWS and those who did not are similar. There is no indication that the students who enter are more solitary than those who do not.

TABLE A-6

FREE TIME ACTIVITIES OF APPLICANTS TO FWS, BY GROUP

Rank for Total Group	Category	Original Experimental Group			Original Control Group	
		Entered FWS N=59 %	Chose Not to Enroll N=43 %	Entered and Dropped N=12 %	Tested Controls N=88 %	Untested Controls N=81 %
1	Sports	51	53	50	52	57
2	Creative Arts	44	42	17	40	20
3	Reading	37	44	33	23	27
4	Outdoor Hobbies	20	30	25	22	22
5	Records, Radio, T.V.	17	16	17	19	21
6	Social Activities	24	14	17	11	20
7	Indoor Hobbies	19	16	33	18	11
8	Bicycling	14	12	17	16	17
9	Domestic Arts	12	21	8	7	14
10	Volunteer, Community Work	8	16	0	8	10
11	Academic Interests	5	5	0	7	9
12	Being with Friends	8	5	0	6	5
13	Babysitting	5	5	8	6	2
	Other	19	16	8	11	19
	None	0	0	0	1	5
	Blank	3	0	8	9	4

APPENDIX B

TABLES OF SUPPLEMENTARY INFORMATION

TABLE B-1

PAID EMPLOYMENT OF FWS STUDENTS DURING THE SCHOOL YEAR

Amount of Time Worked	FWS Returning Group N=15 %	FWS Entering Group N=72 %	FWS Total Group N=87 %
Did not work	33	39	38
Less than 5 hours per week for less than one month	20	10	11
Less than 10 hours per week for less than one semester	0	8	7
Less than 15 hours per week for less than one semester	13	13	13
Less than 20 hours a week for at least one semester	7	19	17
Either more than 20 hours a week for at least one semester or more than 15 hours a week for almost all year	27	11	14

TABLE B-2

POSITIVE OPINIONS ON SCHOOL PROGRAM
LISTED BY STUDENTS AT END OF SCHOOL YEAR*

Response Category	FWS Returning Group N=15		FWS Experimental Group N=56		Control Group N=64	
	f	%	f	%	f	%
Freedom	0	0	19	25	11	5
Curriculum/instruction; student control over curriculum	1	7	8	11	11	13
Improved attitude toward school/learning	1	7	10	13	8	10
Relate better/do more with people	0	0	5	7	9	11
Gained knowledge of careers/ world of work	0	0	6	8	2	2
Received enough attention; learned more	1	7	1	1	8	10
School helped me plan for future work and/or education	0	0	1	1	3	4
Unspecified likes; other likes	1	7	6	8	4	5
Not applicable; don't know	1	7	9	12	10	12
All blank or no likes mentioned	10	65	10	13	24	29

* Students gave up to three responses. Figures on the table are based on number of responses in each category.

TABLE B-3.

NEGATIVE OPINIONS ON SCHOOL PROGRAM
LISTED BY STUDENTS AT END OF SCHOOL YEAR*

Response Category	Student Group					
	FWS Returning Group N=15		FWS Experimental Group N=56		Control Group N=64	
	f	%	f	%	f	%
Not enough freedom	1	4	0	0	4	6
Not enough course variety; no student control over curriculum	2	8	2	4	5	8
Decreased interest in school/ learning	1	4	1	2	2	3
Unable to get along with people	3	12	0	0	4	6
Didn't get instruction/ courses that wanted	0	0	3	5	6	8
Not enough individual attention; didn't learn much	1	4	2	4	1	1
Too crowded; no quiet study area	6	23	0	0	0	0
Unspecified dislikes; other dislikes	3	12	2	4	5	7
Not applicable; don't know	1	4	9	16	10	14
Blank or no dislikes mentioned	8	29	38	67	33	47

* Students gave up to three responses. Figures in the table are based on number of responses in each category.

TABLE B-4

OPINIONS OF FWS AND CONTROL STUDENTS ON THE BEST WAY TO TEACH
(FREQUENCIES IN ORIGINAL CATEGORIES)*

Best Teaching Method	Frequency of Responses					
	FWS Returning Group N=15		FWS Experimental Group N=56		Control Group N=64	
	pre	post	pre	post	pre	post
Teacher cares	1	2	1	3	7	6
Teacher informs	4	2	12	13	22	32
Teacher motivates	3	1	3	3	1	4
Teacher shows	0	0	2	3	7	7
Teacher assists one-to-one	5	0	12	6	11	8
Student goes at own pace	2	3	0	4	2	2
Student decides what he needs	1	2	3	16	3	8
Student experiences	4	4	8	5	14	4
Don't know, not applicable	2	3	12	14	7	10
Blank	2	0	12	5	8	6

* Frequencies may be greater than N because up to three responses were recorded for each student.

APPENDIX C

NOTE ON THE FACTOR ANALYSIS PROCEDURE

Choice of the multivariate analysis method was made on the basis of several considerations. Little is known about the effective core elements of the EBCE instructional program or about the linkages that may be operating between single, or combinations of, elements of instruction and particular outcomes. Moreover, there is as yet almost nothing known about which kinds of students seek out or make use of particular program elements from among the many available to them. The situation is one in which dimensions are not defined a priori, and the purpose of the methodology is to generate suitable dimensions that will permit examination of some of the interactions with instructional elements operating within this highly individualized system. To begin to define the interaction effects mentioned, it was desirable to cluster a large group of selected measures into subgroups on the basis of the observed correlations among a set of measures. The intent was to generate hypotheses in an exploratory, descriptive study.

Sixty-three measures were selected for this purpose from data that had been collected on a large number of potentially pertinent variables. Each measure had been earlier designated as representing either a student characteristic, a treatment, or an outcome variable. The number of students varied between 80 and 87, except for six variables with Ns between 66 and 79 (see Table IV-26). Intercorrelations were computed with a program accommodating unequal Ns. The factor analysis was carried out using Kaiser's varimax method yielding orthogonal factors. Sixteen factors were obtained and accounted for 69 percent of the intercorrelation variance. The eigenvalue for the 17th factor was 1.02.

Interpretation of factors was based on loadings above .299. Thirty-seven variables were unique to a single factor; 21 had loadings on two factors, five on three, and none on more than three.